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By Email: NGSconsultation@nda.gov.uk

Your Ref:
Our ref: SP/Nuleaf
Date: 03 December 2015

Dear sir/Madam

National Geological Screening Guidance: Providing Information on Geology
A public consultation 8 September to 4 December 2015
By Radioactive Waste Management Ltd

The following is the officer response from Essex County Council (ECC) to the above consultation, and the presentation to Nuleaf on 15 October 2015 and the regional workshop held in Ipswich on 2 November 2015.

ECC is a member "NuLeAF", the "Nuclear Legacy Advisory Forum", a Local Government Association's Special Interest Group on Nuclear Decommissioning and Radioactive Waste Management. NuLeAF provides an effective service and basis for technical support and forum for all Local Authorities on this complex and unique topic, to enable all authorities to engage with Government, the NDA and nuclear industry alike on current and emerging nuclear legacy issues.

1. Scope of the Consultation

It is noted that the scope of this consultation is solely concerned with "Geological Screening" element in the Governments white paper – *Implementing Geological Disposal: A Framework for the long-term management of higher activity radioactive waste*, published 24th July 2014, and it does not address the Planning or Community elements.

Furthermore this consultation is only concerned with on how" to engage, inform and present the existing geological information to communities in a meaningful manner, with regard to the requirements of a national Geological Disposal Facility (GDF). Therefore the proposed outcome is to define a format and approach to enable communities to better engage with and understand the facts and issues when they are considering their involvement in the siting process for the national GDF. Hence the consultation does not identify geographical areas suitable for a GDF, and it does not consider the wider Planning and Community elements.

2. Overview

The geological aspects of the GDF siting process are crucial to its success. In making a decision to enter into the siting process, a community needs to know, with as high a degree of certainty as possible, that the geology in their area is likely to be capable of hosting such a facility.

As the siting process progresses, and further investigations are made, both the developer and community must have confidence that the proposed site of the Geological Disposal Facility has a geology that can safely contain all waste deposited.

Underpinning this are three key challenges:

- At the outset of the process, to provide as much information as possible on geology across England, Wales and Northern Ireland, in a form that is accessible to non-expert audiences and

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communities. This needs to be clearly evidenced and presented with a supporting narrative at the sub-regional level to be meaningful local communities;

- To ensure that further investigations (such as deep boreholes) in candidate areas lead to the greatest clarity possible on the geology. This must be coupled with advice from pre-eminent experts, ensuring a high degree of confidence of the safety of the facility; and
- That local authorities, community siting partnerships and communities are effectively engaged throughout the process, enabling them to be reassured as to what is proposed. Given that the siting process is based on voluntarism, this is vital. Uncertainty about geology was one of the reasons for the failure of the previous Managing Radioactive Waste Safely process in West Cumbria.

The screening guidance provides an important framework for the delivery of an effective process. It is essential that the process is both engaging and transparent.

3. Response to questions

ECC's responses to the consultation questions are set out below; and in many cases these reflect the response provided by NuLeAF.

Question 1: To what extent do you think our proposed approach to providing national-scale existing information about geology relevant to long-term safety is appropriate?

In general terms the proposed approach is supported, in so far as it is clear and also recognises the limitations of any national-level information that can be produced.

The role of Independent Review Panel (IRP) and external experts is welcomed, and should help ensure the rigorous assessment of the process and the information provided. This in turn will increase public confidence in the veracity of what is produced.

The commitment to provide information on geology up to 20km off-shore is supported. Some communities may have fewer concerns about the development of an under-sea facility than one directly under their community.

The consideration of smaller areas that may not be able to host the full inventory, is welcomed, but agree with the lower limit set on the size of suitable rock that must be available.

It is considered that the guidance could be improved in respect of the explanation and representation of how a GDF might be developed in either evaporites (salt) or lower strength sedimentary rocks (clays). Communities need further clarity about how a GDF in the range of geological formations may differ in terms of its form and engineering and respective associated costs. It is considered that this should be presented, in order for this to be a truly informed and transparent process.

Question 2: To what extent do you think that these sources (of information) are appropriate and sufficient for this exercise?

It is considered that the information sources identified are appropriate and the best available for this exercise given the constraints.

That said, it is clear that there are significant gaps in the information, for example in relation to groundwater. The guidance and the geological information produced must be clear on these limitations and gaps, and explain how they will be addressed for any area entering into the siting process, including the likely timeframe for the information to be gathered. Any gaps or omissions in the data could be open to negative interpretation.

Question 3: To what extent do you agree or disagree with the proposed form of the outputs from geological screening? What additional outputs would you find useful?

It would be appropriate to present the outputs based on regions aligned with British Geological Survey areas.

It would be useful to have more explanation on the resolution of the information that will be provided i.e. will it enable a community to understand specific areas within their local authority boundaries that may be suitable/unsuitable, or will it only provide a more general sense of where is less suitable across the UK? Given the complexity of geology in some areas there is a need to represent information with as much clarity as possible.

As the guidance proposes, there is a need for both maps and visual representations as well as text description. Clearly, all visual information and text must be accurate but also as accessible as possible. Further engagement through focus groups and other public and professional groups (e.g. local authority planners) to test the accessibility of the presentation of the information, before final versions of the information are issued publically.

Human nature dictates that everyone will want to be able to place their community on the map and see how the information relates to them specifically. Maps should include sufficient detail for people to be able to approximately locate their community. Maps should all be produced to the same scale. In order to be meaningful it may be appropriate to present the information at a "sub-regional" level.

Some indication of the level of work involved in providing more detailed geological information would help communities to gauge the impact of participating in the process.

Question 4: Do you have any other views on the matters presented in the draft guidance?

To assist communities in understanding the nature and scale of the project, the provision of information on mines and hydrocarbon extraction below 100m is supported and it is recommended that is extended to include other activities such as fracking, which may impact on the security of a GDF. Further information on how, or if, such developments could co-exist within an area should be provided.

Examples of seismic events that can occur within the UK, and comparison between these and international examples, would be beneficial to understand the level of activity in the UK. Information on the impact of seismic activity at depth would also be appropriate.

The use of plain English and suitable formats to ensure the information is accessible to all is recommended.

Next Steps

It would be beneficial if the consultation outline the next steps and timeframes, to enable on-going engagement.

Yours faithfully



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