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DEPARTMENT OF ENERGY & CLIMATE CHANGE

Response of the UK Government and the Department of the Environment, Northern Ireland to the Committee on Radioactive Waste Management (CoRWM) Report on '*Geological Disposal of Higher Activity Radioactive Wastes*'

12th November 2009

1. INTRODUCTION

1.1 The primary task of the Committee on Radioactive Waste Management (CoRWM) is to provide independent scrutiny of the Government's and Nuclear Decommissioning Authority's proposal, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes. In June 2007 the Scottish Executive announced a policy of near-surface, near-site long-term storage rather than geological disposal. However, it continues to sponsor CoRWM on storage and related research and development matters.

1.2 In June 2008, sponsor Ministers agreed CoRWM's 2008/09 work programme. This included scrutiny of progress on the implementation of geological disposal through the Managing Radioactive Waste Safely (MRWS) programme as set out in the 2008 'Managing Radioactive Waste Safely' (MRWS) White Paper[1]. CoRWM's report 'Geological Disposal of Higher Activity Radioactive Waste' was published on 31 July 2009 and focuses on those aspects of the implementation of geological disposal that CoRWM considers to be crucial in establishing confidence in potential host communities and in ensuring the technical robustness of the site selection process, the geological disposal facility design process and the development of the disposal system safety case. The full report is available on the CORWM website at www.corwm.org.uk.

1.3 This document is the response of the UK Government and the Department of the Environment, Northern Ireland (hereafter referred to as 'Government') to the recommendations in the CoRWM report. As explained in the MRWS White Paper[2], the Welsh Assembly Government continues to play a full part in the Managing Radioactive Waste Safely programme. However, it reserves its position on geological disposal of higher activity radioactive waste and has noted this report on geological disposal. In line with CoRWM's Terms of Reference, this document will be made available along with CoRWM's report to respective Parliaments and Assemblies.

[1] Defra, BERR and the devolved administrations for Wales and Northern Ireland 'Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal', (Cm 7386), June 2008. www.decc.gov.uk/mrws

[2] Defra, BERR and the devolved administrations for Wales and Northern Ireland 'Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal', (Cm 7386), June 2008, paragraphs 1.10-1.12

2. GOVERNMENT RESPONSE

2.1 Government thanks the Committee for its report and welcomes the recommendations. The report provides the opportunity to review progress made on the Managing Radioactive Waste Safely (MRWS) programme since the publication of the 'Managing Radioactive Waste Safely' White Paper in June 2008, including engagement with local communities, regulation of the process and the work being done to develop concepts and designs for geological disposal. It also provides an opportunity to clarify in our response how Government proposes to take forward some aspects of the MRWS programme and highlight some of the work that is being undertaken to underpin it.

2.2 Government welcomes the open and consultative manner in which the committee has drafted this report and its engagement of the key organisations, stakeholders and the public.

2.3 Government largely agrees with the CoRWM recommendations and our response sets out the work already in progress or planned that will address them.

2.4 The following section provides Government's response to the Committee's five specific recommendations in more detail.

3. RECOMMENDATION 1

CoRWM recommends to Government that it begins work now to develop the principles to be used in deriving Community Benefits Packages and the process by which Packages would be agreed. This should include work on providing confidence that, once agreed, such Packages will be delivered.

3.1 Government set out its commitment to a Community Benefits Package in the 'Managing Radioactive Waste Safely' (MRWS) White Paper, published in June 2008. The White Paper recognises that hosting a geological disposal facility is likely to bring significant economic benefits to a community in terms of employment and infrastructure, maintained over a long period. It also acknowledges that there may be other benefits which may be commensurate with developing the social and economic wellbeing of a community that has decided to fulfil such an essential service to the nation. These benefits would be based on the needs of the community and are likely to reflect the fact that development and operation of a geological disposal facility will be an intergenerational issue. Government remains committed to the principle of ensuring local community benefit from hosting a geological disposal facility.

3.2 The White Paper provides an illustrative list of some overarching objectives for investment that a community might benefit from as a result of hosting a geological disposal facility but it should be emphasised that these are merely illustrative examples. Government does not believe it sensible, or possible, to try to specify at this stage what specific mechanisms could be used, or the level or nature of benefits that will be required in any particular community. This cannot be a pre-prepared generic process to be applied rigidly across all potential host communities. It will be very much site-specific and must remain flexible to accommodate the practicalities of different local situations.

3.3 Government cannot know in advance any particular local community's needs arising from hosting a facility. As such, we remain open-minded, believing that any benefits package must be developed jointly between local communities and the Government as discussions about hosting a facility progress, taking into account these local needs as well as practical issues of affordability and value for money.

3.4 Government does not want to be unduly prescriptive at this early stage. What might be agreed to be appropriate in one community may not be suitable in another. Higher level principles are set out in the White Paper and further work to progressively develop benefits in individual areas will be undertaken in dialogue with interested local communities as the process moves forward. If a community felt that work to provide confidence in benefits being delivered was necessary then this could also be undertaken.

3.5 Final agreement on a package that delivers appropriate investment is likely to take time, and possibly some years, but Government is fully committed to working with any local community to ensure that the project contributes to its development and well-being and expects such agreement to be reached progressively, whilst proceeding through the stages of the voluntarist process.

4. RECOMMENDATION 2

CoRWM recommends to Government that it should explain how local stakeholders would have the opportunity to influence the outcome of the planning application process for a geological disposal facility if the application is referred to the Infrastructure Planning Commission.

4.1 Whilst not having yet taken a final decision, the UK Government is currently inclined to look towards applying the new planning system for nationally significant infrastructure to any geological disposal facility developed in England. Such a facility is likely to be an infrastructure project of national significance, which is precisely the sort of development the new regime has been designed for. If a final decision is taken to use this new system, national policy for the geological disposal of radioactive waste would be set out in a National Policy Statement (NPS), which could only be finalised following appraisal of sustainability, public consultation and parliamentary scrutiny. Once an NPS is finalised it will provide the framework within which the Infrastructure Planning Commission (IPC) will take decisions on individual applications. An NPS on geological disposal could indicate potentially suitable sites in which case, as well as consulting nationally, more extensive local consultation would be required. This would also give local communities and other stakeholders an opportunity to comment and influence the policy in the NPS. Further information on the consultation process is set out below at paragraph 4.4 and also at the Communities and Local Government website[3].

4.2 The decision on which planning regime should apply to a geological disposal facility does not need to be taken at this moment, however, and no matter what the eventual outcome, public consultation and participation will be at the heart of this process. As the MRWS White Paper makes clear, the existing statutory consenting arrangements will continue to apply to any proposal for a geological disposal facility in Wales and Northern Ireland[4].

4.3 The MRWS siting process is based on voluntarism and partnership. The setting up of a Community Partnership should ensure that, as the siting process progresses, questions and concerns of local stakeholders are addressed and resolved as far as reasonably practical. Community engagement and collaborative working is key, with the siting process staged to give all those involved the opportunity to take stock before deciding whether or not to move to the next stage. A volunteer community has a Right of Withdrawal such that up until a late stage, and before underground operations and construction are due to begin, if it wishes to withdraw then its involvement in the process would stop. A community would, therefore, have been through the whole volunteer process with full rights of withdrawal before a planning application for a geological disposal facility was made.

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[3] http://www.communities.gov.uk/documents/planningandbuilding/pdf/routemap.pdf

[4] Defra, BERR and the devolved administrations for Wales and Northern Ireland, 'Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal', (Cm 7386), June 2008, paragraphs 5.32 and 5.33.

4.4 Whilst a local community may be supportive of the geological disposal facility development in general, having been through the volunteer process, it is likely to want to have input on the detail of the planning application. Under the new system introduced by the Planning Act 2008 there would be the following opportunities for local stakeholders and others to get involved:

- **On draft National Policy Statements**: The UK Government is committed to thorough and effective public consultation on all draft National Policy Statements. All stakeholders have the opportunity to get involved in the development of the NPS. Where NPSs set out potential locations for development there will be local consultation with the communities that may be affected.

- **Before the application is submitted**: Developers have a duty to consult the local community and other relevant stakeholders about any proposed application, and to take into account responses received, before they submit their application for development consent to the IPC. Failure to undertake pre-consultation as required can result in an application not being accepted by the IPC.

- **Role of the local authority**: Local authorities have a pivotal role to play in ensuring that local concerns are heard. Firstly, developers must consult with the local authority about how to carry out consultation with the local community. Local authorities will also be invited to submit a local impact report as part of the IPC's consideration of an application. The IPC must take account of the local impact report when making its decision.

- **During the examination**: During the IPC's examination of applications local stakeholders (individuals and groups) can submit evidence in writing as well as in person at open-floor hearings held by the IPC. When hearings are held, they will be held in public and anyone can attend.

4.5 It is also worth noting that a planning application for underground construction is not likely to be made for many years, perhaps a decade or more, but whatever the planning regime in place at the time, Government will facilitate communities' access to information on how they can participate in the process.

5. RECOMMENDATION 3

CoRWM recommends to Government that the Nuclear Decommissioning Authority and the Government should discuss with communities that have expressed an interest, the advantages and disadvantages of single- and two-stage planning applications for underground investigations and construction of a geological disposal facility. In particular, the discussions should cover the hold points, that could be subject to conditions attached to approval of a single application, and opportunities for local stakeholder engagement at such hold points.

5.1 Government welcomes this recommendation, recognising that a lack of transparency in the process was a criticism levelled at the Nirex planning

application for a Rock Characterisation Facility in the 1990s. The advantages and disadvantages of single- and two-stage planning applications for underground investigations and construction of a geological disposal facility will form part of the discussions that Government and the Nuclear Decommissioning Authority (NDA) will have with potential host communities. In a process involving such public interest and sensitivity as radioactive waste management Government will expect the NDA to ensure that it takes an approach to its planning applications that carries sufficient public acceptability at the local level.

5.2 As described in the 'Managing Radioactive Waste Safely' White Paper, past experience has indicated that even for a planning application solely for underground investigations it is likely to be necessary to demonstrate some degree of confidence that the location is likely to be appropriate for construction of a disposal facility. This suggests that a single planning application may be possible. On the other hand, separate planning applications may be required if sufficient information cannot be obtained from surface-based investigations to give the required confidence.

5.3 Whichever planning application process is followed, and however many stages it contains, there will be appropriate hold-points and associated opportunities for local stakeholder engagement. Government envisages that the planning permission(s) or development consent will contain suitable conditions linked to and aligned with the regulatory decision-making processes. For example, a disposal facility cannot operate without an authorisation under the Radioactive Substances Act 1993 (RSA93), granted by the relevant environment agency. The agency's consideration of any application for authorisation must involve a further public consultation before they can reach a decision. Clear linkages between the regulatory and planning processes are proposed in the environment agencies' 'Guidance on Requirements for Authorisation' for geological disposal facilities, published in February 2009[5]. These will enable a co-ordinated approach to ensure that local communities have adequate opportunity to input their views and are provided with regularly updated information on the developer's progress and plans, and also with the views of the regulators in the areas of safety, environment, transport and security.

5.4 The Government believes that the arrangements for formal Right of Withdrawal and partnership working to influence NDA plans in the voluntarist site selection process; the commitment to public engagement in the new planning regime; and the requirement for further public consultation in the regulatory process, provide extensive opportunities for public engagement to be incorporated within the route to planning decisions, whether they are one or two-staged.

[5] Environment Agency, Northern Ireland Environment Agency, 'Geological Disposal Facilities on Land for Solid Radioactive Wastes: Guidance on Requirements for Authorisation', February 2009. http://publications.environment-agency.gov.uk/pdf/GEO0209BPJM-e-e.pdf

6. RECOMMENDATION 4

CoRWM recommends to Government that it should ensure that the Nuclear Decommissioning Authority carries out option assessments in which a wide range of geological disposal concepts is considered. These should include disposal in facilities constructed using various techniques, at depths ranging from about 200m to 1km, disposal of all higher activity wastes in a single facility, separate facilities for various types of higher activity wastes, and facilities incorporating different degrees of retrievability. A wide range of stakeholders should be involved in these assessments.

6.1 Government agrees that implementation of geological disposal must include consideration of relevant options to optimise design and expects NDA to undertake such work, recognising that this will be a long process. Generic work on identifying and evaluating options for a geological disposal facility has already begun, drawing on the wealth of existing information from past work in the UK and overseas over the last few decades. However, much of the work on facility design is dependent on the site geology and location, and options can only be narrowed down once potential facility sites are identified. Final decisions will only be made when sufficient information is known about a chosen site.

6.2 The NDA has identified a range of generic geological disposal concepts that provide safe and secure geological disposal of higher activity wastes for potentially suitable UK geological settings. These include concepts for hard rock, soft rock and evaporates and draw on previous work in the UK and disposal programmes in other countries. Initially, the NDA's approach will be to work on a limited number of illustrative concepts to be developed for generic geological settings, including variants reflecting a range of possibilities for different overlying rocks. Conceptual engineering designs will be developed to reflect the range of possibilities to allow the assessment of safety and environmental impacts. However, this does not mean that the concepts developed will be those intended to be used in that geological setting. At this stage, no geological disposal concept has been ruled out. Development of the NDA's geological disposal concepts will be carried out in line with its commitments to involve and engage with stakeholders[6].

6.3 Whilst Government policy as set out in the 'Managing Radioactive Waste Safely' White Paper is to pursue the geological disposal of higher activity wastes, it recognises the need to take account of developments in disposal options as well as possible new solutions. NDA monitors developments in alternative options for the management of higher activity wastes, including borehole disposal. It also runs strategic projects to investigate opportunities. For example, NDA is investigating treatment options for reactor graphite which might permit it to be consigned to routes other than geological disposal and for reactor steel, where decay storage could be applied to produce a low level waste or potentially recyclable product.

[6] Nuclear Decommissioning Authority, A Public and Stakeholder Engagement and Communications Strategy, July 2009. www.nda.gov.uk/documents/upload/Geological-Disposal-A-Public-and-Stakeholder-Engagement-and-Communications-Strategy-July-2009.pdf

6.4 The NDA's Radioactive Waste Management Directorate's Strategy for Sustainability Appraisal and Environmental Assessment for Geological Disposal describes the planned approach to Strategic Environmental Assessment and Environmental Impact Assessment at key stages during implementation. Strategic Environmental Assessment includes the evaluation of realistic alternatives and this strategy states that developments in waste management options will be fed into the appraisals and assessments as appropriate. The work on alternatives will continue throughout the concept and facility design processes to check that there have been no significant developments in waste management options that could change decisions taken earlier in the MRWS process, without adverse impacts that would outweigh potential benefits. Stakeholder engagement is key to successful sustainability appraisals and environmental assessments and the NDA's approach to achieve this is described in this strategy. The NDA will also work with the Community Siting Partnerships to ensure they are engaged in the assessment process.

6.5 Government expects the NDA to apply optimisation to implementation of geological disposal, recognising that in reaching optimisation decisions on some issues, NDA will need to take account of prior decisions that could influence outcomes. For example, hazard reduction requires that legacy wastes are retrieved and packaged in a timely manner having regards to disposability assessments made at the time of packaging. Therefore, decisions on the disposal of waste packages already manufactured and in interim storage will have to take due account of the nature of those existing packages and how they can best be accommodated in the final disposal facility design.

6.6 Decisions made at any stage of the geological disposal facility implementation project are subject to review until implemented, but the level of effort spent on considering alternative options is expected to progressively reduce as implementation of the facility proceeds and as uncertainty is reduced.

7. RECOMMENDATION 5

CoRWM recommends to Government that it should ensure that the Nuclear Decommissioning Authority has an integrated process in place for geological disposal facility design, site assessments and safety case development. The process should be described in publicly available documents that have been reviewed by independent experts and the regulators.

7.1 Government agrees that it is essential that an integrated process is in place for geological disposal design, site assessments and safety case development and that the process should be open and transparent.

7.2 NDA has a process in place for the current stage of work, which will be developed in future to accommodate information from the site assessment and investigation stages. A suite of documents setting out how this will be achieved will be published by the NDA as the process moves forward, beginning in early 2010, when the NDA's Radioactive Waste Management Directive (RWMD) intends to publish a document describing the preparatory work that it has undertaken so far,

the planning of its future work programme and the proposed management arrangements to deliver that programme. This suite of documents will be made available for review and scrutiny by regulators and other stakeholders, and are intended to demonstrate how RWMD is approaching the planning and design of a disposal facility. There will be further opportunity then for CoRWM and others to consider and comment on these documents as they develop in future.