

29 June 2009

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## **Consultation on UK Strategy for Managing Low Level Radioactive Wastes from the Nuclear Industry**

### **Summary**

- 1 This paper is intended to inform the Board's discussion of whether to: (a) respond to consultation on Nuclear Decommissioning Authority (NDA) proposals for a Strategy for managing low level radioactive wastes (LLW) from the nuclear industry; and (b) adopt an updated position statement on LLW management.
- 2 The paper explains:
  - Government policy on LLW management
  - development of the NDA strategy on LLW management
  - the outcome of pre-consultation discussion between NDA and NuLeAF
  - the outcome of NuLeAF seminars on the proposed strategy and key points to make in response to consultation, and
  - proposed next steps.
- 3 Fred Barker, NuLeAF's Executive Director, will be attending to introduce the paper.
- 4 Annex A provides an outline of the different categories of radioactive waste.
- 5 Annex B contains the LGA's current position statement on LLW management.
- 6 Annex C contains proposed main points to make in response to consultation on the LLW strategy.

#### **Decisions**

Members are invited to endorse the main points for a response to the NDA consultation on LLW strategy.

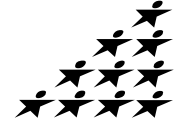
#### **Action**

Subject to the above decision, for the Chairman of the Environment Board to agree a final version of the consultation response following feedback from discussion at the NuLeAF Steering Group on 15 July. That the Chairman also agree any amendments to the position statement that might be required following further discussion.

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## **Government Policy on LLW Management**

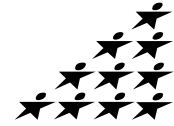
- 1 Policy for the management of LLW was published in March 2007 (see Annex A for an explanation of the categories of radioactive waste). The overall aim of the policy is to enable greater flexibility in managing LLW, recognising the needs of large scale decommissioning and environmental restoration within the nuclear industry.
- 2 The policy sets out a number of core principles, including:
  - Use of a risk-informed approach to ensure safety and protection of the environment
  - Minimisation of waste arisings
  - Consideration of all practicable options for managing LLW
  - A presumption towards early solutions
  - Appropriate consideration of the proximity principle and waste transport
- 3 The policy also set out a number of requirements on the NDA, including development of a UK nuclear industry LLW strategy, which is the main subject of this report.
- 4 In response to Government policy, and following advice from NuLeAF, the position statement at Annex B was adopted by the LGA in May 2008. This statement is broadly supportive of Government policy, but highlights the need for proposals to be taken forward in ways that address local authority views and inspire public confidence.

## **Development of the NDA Strategy on LLW Management**

- 5 Strong cost and disposal capacity drivers have influenced development of the NDA's proposed LLW strategy. On costs, LLW liabilities are estimated at £10 billion, with the NDA targeting a reduction of 10%. On disposal capacity, NDA states that the remaining capacity of the LLW Repository near Drigg in Cumbria is around 0.7 million cubic metres, subject to planning and regulatory approvals. Based on projected waste arisings<sup>1</sup>, a new national LLW repository could be required by the mid 2030s. Because of the costs involved and difficulty in siting national disposal facilities, NDA is very keen to push this date back as far as possible.
- 6 Against this background, strategy development has been based on three key themes:

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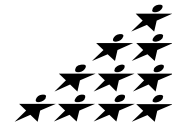
<sup>1</sup> Predicted arisings of LLW are three million cubic metres, covering a broad spectrum of activity levels and materials. Approximately 60% is declared as Very Low Level Waste or mixed VLLW/LLW. The figure does not include large volumes of potentially contaminated land that is yet to be characterised.



- Application of the waste management hierarchy
  - Making best use of existing assets (including optimised use of the LLWR)
  - Opening and exploiting new disposal routes
- 7 During the course of the strategy review, NDA identified a large number of initiatives that could be taken, many of which involve reliance on the supply chain to offer the use of, or develop, facilities away from existing nuclear sites, including metal treatment, incineration and landfill (“off-site initiatives”).

### **Outcome of Pre-Consultation Discussion between NuLeAF and NDA**

- 8 Development of the LLW strategy has been informed by discussion at the NDA’s LLW Strategy Group, which includes NuLeAF and Cumbria County Council as members (the latter as the Waste Planning Authority for the LLWR). During the last year, discussion in this group made it clear that NDA intended to place considerable emphasis on “energising the supply chain” to deliver off-site initiatives.
- 9 Both NuLeAF and Cumbria CC stressed that an emphasis on ‘off-site’ initiatives would raise significant concerns within local government and require widespread public debate. They pointed out that concerns are likely to include:
- transport of VLLW/LLW within local communities;
  - increased pressure on the limited remaining capacity at existing landfill sites;
  - potential adverse economic impacts on a local area caused by negative perceptions of the use of facilities for LLW treatment or disposal; and
  - the risk of opposition from local communities.
- 10 NuLeAF proposed that, where practicable, it would be better for LLW management and disposal facilities to be concentrated on or adjacent to existing nuclear sites. It argued that in many cases the use of purpose designed facilities under the supervision of nuclear site management would be more likely to be acceptable to local communities.
- 11 As a result of discussion, NDA has modified its proposals by stressing the importance of waste consignors undertaking assessments to identify the best practicable approach at a local level, including a comparison of on-site and off-site initiatives, and taking into account local community views. However, NDA still proposes to place reliance on the supply chain, in preference to centralised investment. This preference is likely to militate against the development of facilities at or adjacent to existing nuclear sites.



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## **Outcome of NuLeAF Seminars on the Proposed LLW Strategy**

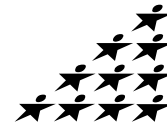
- 12 In order to promote discussion of the proposed strategy within local government, NuLeAF organised seminars in Manchester (7 May), London (12 May) and Taunton (14 May), with presentations on the regulation of LLW management, proposed NDA strategy for managing LLW and proposals for LLW strategy for the Non-Nuclear Industry<sup>2</sup>.
- 13 The report on the seminars is available on the NuLeAF website ([www.nuleaf.org.uk](http://www.nuleaf.org.uk)). In total, 48 people participated, including representatives from 29 local authorities, the Greater Manchester Geological Unit, Merseyside Environmental Advisory Service, the supply chain, the Planning Inspectorate and the Environment Agency.

## **Proposed Next Steps**

- 14 The NDA consultation was launched on 5 June and runs until 11 September. The consultation document is available on the NDA website ([www.nda.gov.uk](http://www.nda.gov.uk)). Annex C summarises the 'headline' points that might be made in response, taking into account discussions at the NuLeAF seminars. The intention is to develop the note into a draft consultation response for consideration by the NuLeAF Steering Group on 15 July.
- 15 Members are invited to endorse the main points for a response to the NDA consultation as set out in Annex C. Subject to that endorsement, it is proposed that the Chairman of the Environment Board agree a final version of the consultation response following feedback from discussion at the NuLeAF Steering Group on 15 July. It is also proposed that the Chairman agree any amendments to the position statement at Annex B that might be required following further discussion.

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<sup>2</sup> Consultation on strategy for managing LLW from non-nuclear industries is likely to start in the autumn.

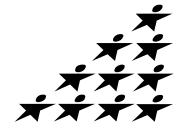


## Categories of Radioactive Wastes

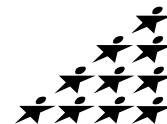
Radioactive waste is any material that is either radioactive itself, or is contaminated by radioactivity, for which no further use is envisaged. Most radioactive waste is produced by nuclear power station operators and associated fuel cycle facilities. A substantial amount arises from nuclear research and development sites. Some also arises from Ministry of Defence sites, and relatively small amounts are produced by medical, industrial and educational establishments.

In the UK, radioactive waste is classified under the following broad categories:

- **High Level Wastes (HLW)** – these are highly radioactive and generate substantial amounts of heat. HLW is a product from reprocessing spent nuclear fuel at Sellafield in Cumbria. If declared a waste, spent fuel would also be categorised as HLW.
- **Intermediate Level Wastes (ILW)** – these are wastes where the radioactivity levels are higher than for Low Level Waste, but which do not require heat content to be taken into account in the design of management facilities. ILW is sufficiently radioactive to require shielding and containment. It arises mainly from the reprocessing of spent fuel and from operations and maintenance at nuclear sites.
- **Low Level Waste (LLW)** – Unlike HLW and ILW, LLW does not normally require shielding during handling or transport. Currently, LLW consists largely of paper, plastics and scrap metal items that have been used in hospitals, research establishments and the nuclear industry. In future there will be large volumes in the form of soil, concrete and steel, as nuclear plant are decommissioned.
- **Very Low Level Waste (VLLW)** – this is a sub-category of LLW, consisting of the same sorts of materials, and divided into Low Volume ('dustbin loads') and High Volume ('bulk disposal'). Low volume VLLW can be disposed of to unspecified destinations with municipal, commercial or industrial waste. High volume VLLW can be disposed of to specified landfill sites and controls are necessary as specified by the environmental regulators.



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## **LGA Position Statement on Low Level Radioactive Wastes, May 2008**

The decommissioning and clean-up of nuclear sites will give rise to very large increases in the volumes of Low Level Waste (LLW) requiring long-term management at a time when there are major concerns about the capacity, operation and future status of the LLW Repository near Drigg in Cumbria. In addition, there are increasing difficulties in securing disposal routes (eg landfill and incineration) for LLW from the non-nuclear sector.

The LGA recognises the need for the development and utilisation of additional LLW management facilities and wishes to encourage local authorities to engage constructively with industry on proposals. Proposals should be taken forward in ways that address local authority views and can inspire public confidence.

The LGA endorses the following points:

**Minimisation of waste arisings and disposal** - radioactive wastes should be managed in accordance with the waste management hierarchy ie not creating waste where practicable, reducing waste arisings to the minimum and minimising the amount of LLW requiring disposal.

**Consultation and public involvement** - the early involvement of communities and stakeholders in the development of programmes and plans for LLW management is necessary and beneficial. Particular emphasis should be placed on the early involvement of planning authorities.

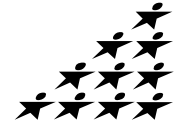
**Willingness to participate, partnership and community benefits** - the concepts of willingness to participate, partnership and community benefits<sup>3</sup> should, in appropriate form, be applied to the development of new LLW disposal facilities.

**Consideration of all practicable options** - preparation of plans for LLW management should be based on an assessment of all practicable options. The assessment of options should be participative, involving participants from potential host communities and their local planning authorities.

**Presumption towards early implementation** - in recognition of major concerns about the operation and future of the LLWR near Drigg, there should be a

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<sup>3</sup> See NuLeAF, 'Community Funds and Radioactive Waste Management Facilities', Briefing Paper 14, March 08



presumption in favour of management options that can be implemented early, including those at different levels of the waste hierarchy.

**The proximity principle and local approaches** - appropriate consideration should be given to the proximity principle, the need to avoid the unnecessary movement of radioactive wastes, and where suitable the implementation of local approaches to LLW management. Option assessments should take into account the proximity principle and transport, alongside other assessment criteria, including public safety and environmental impacts.

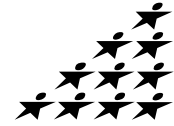
**Openness and transparency about the inventory of wastes** - an open and transparent approach should be taken to the inventory of LLW that could be managed in a proposed facility. Agreement should be reached with the local planning authority about the types and amounts of waste destined for a proposed facility.

**Assessment of need for regional or national disposal facilities** - as it appears unlikely that local approaches to LLW management will be possible in all areas, the Nuclear Decommissioning Authority should take the earliest practicable opportunity to review the need for the development of new regional or national LLW disposal facilities.

**Minerals and Waste Development Frameworks (MWDFs)** – low level waste management is likely to impact on all areas of England and Wales. All waste planning authorities should address potential local developments in their MWDF. Authorities can use the Briefing Paper available from NuLeAF to help identify issues relevant to their area<sup>4</sup>.

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<sup>4</sup> NuLeAF, 'Briefing for Planners on Radioactive Waste Management', Briefing Paper 13, March 2008

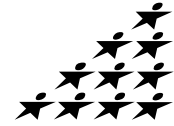


## **Points to make in Response to Consultation on NDA Strategy for Managing Low Level Radioactive Waste**

This note summarises the ‘headline’ points that might be made, taking into account discussion at the NuLeAF LLW seminars in May and a meeting of the NuLeAF LLW Officer Working Group on 9 June. The note will be developed into a draft consultation response for consideration by the NuLeAF Steering Group at its meeting on 15 July.

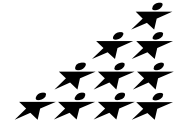
Key points are:

- 1 NuLeAF supports the emphasis in the consultation paper on implementing the **Waste Management Hierarchy (WMH)** and recognises the need to open up **new management and disposal routes for LLW and VLLW**.
- 2 The proposed strategy raises difficult issues with regard to **public perceptions and acceptability**. In recognition of this, NuLeAF welcomes statements in the consultation paper that:
  - “... public acceptability is vital to the development of appropriate waste management plans and their implementation.” (p21)
  - “Development and use of ... new [waste management] routes should consider issues of public acceptability and the community vision for the area in which they are taking place.” (p38)
  - “The use of alternative disposal routes needs to meet the relevant safety requirements ... and be demonstrated to be the Best Practicable Environmental Option by the consigner site, this should include consideration of community issues both at the consigning and receiving sites.” (p39)
  - “... it will be essential to undertake careful and considered engagement with local communities where the implementation of this strategy leads to proposals for new waste management facilities or changes in approach to LLW management.” (p45).
- 3 NuLeAF welcomes the importance attached to the **option assessments** that should be undertaken by consigners at a **local level**. Local factors will be critical to identifying preferred options for managing LLW from specific nuclear sites. The option of developing LLW/VLLW disposal facilities on or adjacent to nuclear sites should be seriously considered in assessments. The views of local communities and their local authorities should be taken into account in



option assessments. It is noted that Govt policy (March 07) contains requirements for **early community input** to development of programmes and plans.

- 4 There are concerns, however, about the NDA's proposed **reliance on the supply chain** to deliver waste management solutions, in preference to centralised investment in new infrastructure. This preference is likely to militate against the commitment to an even-handed assessment of on and off-site initiatives, as the former are more likely to require centralised investment. If the supply chain is not able to develop commercial waste management facilities on or adjacent to nuclear sites, the NDA should be prepared to invest in such facilities, where they represent the best practicable approach and are preferred by local communities and their local authorities (see also point '8' below).
- 5 Notwithstanding the *relatively* small (but uncertain) volumes of LLW/VLLW involved, strategy should recognise the **strong trend away from disposal of non-radioactive wastes to landfill**. Disposal to landfill that is sited away from existing nuclear sites should only take place where it can be clearly demonstrated to be the best practicable disposal option, and after rigorous application of the WMH. Even then, it is likely that many local authorities and communities will have difficulty endorsing such an approach.
- 6 As recognised in the consultation document (p39), when undertaking option assessments, consigners should pay explicit and due regard to the **proximity principle**, as required by Government LLW policy (March 07). In addition, local community views on what constitutes "due regard" should be taken into account in the assessments.
- 7 Strategy should address the approach that should be taken in areas where no local disposal routes are available or foreseeable (see point '8'). Sites in other areas should not become **regional facilities by default** (see point '12').
- 8 There are considerable risks and uncertainties in placing reliance on the supply chain to deliver waste management facilities and to open up new disposal routes. The reference in the consultation document to development of **contingency plans** is welcome (p57-58). The approach of centralised investment, however, should not just be viewed as a contingency, but as part of strategy where such investment is necessary to implement best practicable options (see point '4') and to ensure the availability of appropriate local or regional facilities (see point '7').
- 9 The proposed strategy acknowledges the LLW management needs that may arise from a **new nuclear build** programme (p47). Strategy should encourage local LLW management option assessments to take these potential needs into account. The case for developing LLW facilities on or adjacent to existing nuclear sites should consider the potential for offering a commercial service to operators of new build that neighbour such sites.



- 10 Further consideration is needed of the way in which the final strategy (or associated national plan) will provide adequate **guidance for national, regional and local planning authorities** (p45). Preliminary views are that strategy or plan should:
- Provide a **sufficient evidence base** for planning, with data about the volumes and types of LLW and VLLW arisings on a region by region basis, an indication of the timing of such arisings, and information about existing and reasonably foreseeable facilities for managing LLW and VLLW in each region.
  - Highlight the importance of **early dialogue with the local Waste Planning Authority (WPA)** for the purposes of (a) waste planning and/or (b) development control. This should include early dialogue with the WPA when authorisations for disposal are sought.
  - Highlight the importance of early discussions with the relevant WPAs and regional planners where a facility may develop a “**regionally significant**” role.
  - Where authorisations for disposal to existing facilities are sought, make it clear that the operator should enter into discussion with the WPA to take advice on whether **planning permission** might also be required. This should be considered on a case by case basis, taking into account the original permissions and conditions for operation of the site.
  - Where planning permissions are needed for developing new or existing facilities, recognise that planning needs and/or impacts may arise that should be addressed through the provision of Community Funds based on negotiation of **planning obligations**.