Meeting:	NuLeAF Steering Group, 24th October 2012
Agenda item:	4
Subject:	Radioactive waste management: an update on national developments
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Purpose:	To update the Steering Group on developments at the national level

Introduction

This note updates the Steering Group on recent relevant national developments. It covers:

- NuLeAF/NDA/Magnox engagement meeting and national programme overview
- NDA Low Level Waste (LLW) Regulatory meeting
- NDA LLW Delivery Overview Group (DOG)
- NDA Alternative disposal routes for Very Low Level Waste (VLLW)
- Environmental Permitting and LLW Disposal
- SCCORS Update

Recommendation

That the Steering Groups notes the updates set out in this paper and their implications for NuLeAF and local authorities.

Contribution to Strategic Objectives:

The initiatives are intended to contribute to the achievement of the NuLeAF objectives 4-8 for 2012, namely:

- Seek to ensure that LLW strategy is implemented in ways that can inspire local authority and public confidence.
- Encourage and assist the NDA, SLCs and the supply chain to take full account of the role and needs of the LA planning system in the implementation of LLW strategy.
- Encourage WPAs to develop policy on MWDFs on the management of (LLW and VLLW).
- Encourage NDA to provide sufficient evidence base information and to engage in discussion about the potential for a more strategic approach to the siting of LLW management facilities.
- Subject to site suitability and local community views, encourage development of local or multi-site LLW management facilities at or adjacent to existing nuclear sites, rather than at non-nuclear sites.

1. Engagement meeting with NDA and Magnox and national programme overview

An engagement meeting between NDA, Magnox and NuLeAF was held in London on the 25th September, immediately prior to the meeting of NuLeAF's Radioactive Waste Planning Group (RWPG). The meeting was well attended with talks delivered by Peter Roach of Magnox Limited and Bill Hamilton of the NDA. Both their presentations are available to view on the NuLeAF website as is a full note of the meeting.

Peter Roach spoke on the **Magnox Optimised Decommissioning Programme (MODP)**. This is being undertaken to ensure that waste is dealt with earlier and hazards reduced and that knowledge is shared across all sites. The key outcomes are that Care and Maintenance is being brought forward by a total of 34 years across all sites, with lifetime savings on £1.3Bn. In discussion, Peter assured NuLeAF that neither the Parent Body Organisation (PBO) competition, nor the new nuclear build programme would impact upon the delivery of MODP. NDA hope that the PBO competition will drive the decommissioning process forward, and result in reduced costs and timeline without compromising safety and security. MODP will be the baseline against which competing bids will be judged.

NDA also assured the meeting that all PBO bidders would be required to submit a programme of stakeholder engagement and socio-economic support and this will be a threshold criteria against which bidders will be judged. The current socio-economic programme will be used as a baseline. (See also Agenda Item 7).

Bill Hamilton of NDA gave an **update on the NDA Strategy** and linked activities. The NDA Strategy must be updated every five years. The process for producing Strategy 3 is in the early stages and the issue will be addressed at the National Stakeholder event in Manchester at the end of October which NuLeAF is attending. There is also the opportunity for NDA/NuLeAF to hold a pre-draft consultation seminar/workshop in early 2013 which is currently under discussion.

On **Intermediate Level Waste (ILW),** consultation on credible options for storage of ILW in Central and Southern Scotland has recently closed - NuLeAF submitted a response recapping generic issues which proposals for waste consolidation must address.

Work is being undertaken to review the baseline approach for storage of ILW in England (yellow boxes) and there should be clarity on this in the next 12 months. Consideration is being given to whether it would be advantageous to move away from the baseline of storing ILW in 'yellow boxes' on each site to consolidation at a smaller number of sites. A 'credible options' paper on ILW storage in England and Wales is to follow.

Work is also being undertaken to establish the likely 'credible options' for future **Higher Activity Waste (HAW**) management in 2023, and what the risk and

opportunities may be. Bill Hamilton said NDA would be convening a workshop in early November to explore options.

Progress on **Site Restoration** has been slower than anticipated and a review on the practical options is now underway. An updated strategy development programme should be published by the end of 2012, and further progress will be made over the next 12 months. NDA are aware that local authorities hosting sites expect to be consulted about reviews to site restoration plans – particularly 'interim states', 'end states', and any revisions to 'end dates'.

On **plutonium,** the governments preferred approach is to turn the plutonium into MOX fuel for use in new build reactors, but no formal decision has yet been taken. NDA act as technical advisers to the government on this issue, and are drawing up a business case for the construction of a new MOX plant, while two other options (PRISM and CANDU reactors) are also being considered but are less favoured. NDA is expected to report to Government by the end of this year, though a final decision is not expected before 2015.

Significantly, Bill Hamilton confirmed that NDA was considering options for use of MOX fuel in UK new build reactors. NuLeAF will monitor and report further on the options for use of MOX fuel as any proposed use would a) be a departure from the basis upon which Government consulted upon and agreed the National Policy Statement for Nuclear Power Generation, b) require a review by Office for Nuclear Regulation (ONR) of the Generic Design Assessment Process to ensure approved reactor designs are safe to burn MOX fuel, c) require a further process of justification to ensure benefits outweigh detriments, and d) require a review of arrangements for interim storage of spent MOX fuel, and a review of Geological Disposal Facility (GDF) design and safety to ensure and future repository could accommodate spent MOX fuel within an inventory of wastes for disposal. Local authorities impacted by these various matters will expect to be consulted about the safety and security implications, as no doubt will communities upon MOX fuel transportation routes.

A further engagement meeting with NDA is being held on the same day as the Steering Group (24th October).

2. NDA LLW National Programme Regulatory meeting

The first meeting of the LLW regulators group was held on the 2nd August 2012. The meetings are intended to be a two-way process, enabling Site Licensing Companies (SLCs) to highlight their regulatory and policy issues, and for the regulators to be aware of SLC issues and to provide feedback from their site inspection teams.

Representatives of NDA, LLWR, the Environment Agency, SEPA, the ONR, Cumbria County Council and NuLeAF were present. It was agreed that in future the Scottish Councils Committee on Radioactive Substances (SCCORS) and the defence nuclear safety regulator (DNSR) would be invited to attend.

The key presentation was a high level summary on the National Waste Management Programme. Discussion ranged around a number of issues, the two key ones being:

- Whether non NDA sites should be included – it was agreed to consider how to involve non-NDA sites at the next meeting
- The classification of mixed wastes, particularly those at the ILW/LLW boundary and those which included hazardous wastes such as asbestos.

It was intended that each regulator – SEPA, ONR, EA and NuLeAF would provide an overview of their perspectives on LLW regulation and disposal. Due to lack of time this was held over until the next meeting.

Both NuLeAF and Cumbria County Council (CCC) expressed concerns about the Environmental Permitting process and in particular its failure to fully take account of the end destination of waste, to engage with communities or to address transport implications. Following this discussion, the Executive Co-Directors arranged to meet the Environment Agency to discuss this issue further. A note of this meeting is set out below. It was also agreed that the cross border issues raised by CCC should be on the agenda for the next Delivery Overview Group meeting, with SEPA to make a response.

3. Integrated LLW Programme Delivery Overview Group (DOG)

A meeting of the Delivery Overview Group (DOG) was held in Cumbria on the 14th and 15th August. The aim of the group is to provide a high level overview of progress of the National Waste Programme (NWP) and to share best practice. NuLeAF was unable to attend though Cumbria County Council did.

A progress report on the National Waste Programme was provided and there was discussion of Joint Waste Management Plans (JWMPs) for non-NDA sites and the issues associated with not having robust versions of these available. NDA also provided an update on the development of further strategic guidance for low activity low level waste (LALLW) and very low level waste (VLLW); with a planned output of a strategic paper, an implementation plan and guidance (in conjunction with NuLeAF) to support the planning process.

Richard Evans of Cumbria County Council provided a summary of the UK LLW Policy and Strategy requirements for community engagement and identified where he felt that they were being ignored. This was followed by a discussion. It was acknowledged by LLWR that there were legitimate concerns about these aspects of how the policy was working in practice.

Updates were also provided on:

- The process used by Magnox for the development of their strategic BPEO, including the reasons for the work, the process undertaken and the form of the output.

- Strategic technical work being undertaken within the Programme Office – pond furniture, ILW/LLW cross boundary wastes, asbestos optioneering and orphan waste optioneering.

4. NDA Alternative disposal routes for VLLW

The group met on the 13th September in Cumbria. This was the second meeting of the group, the first being held in April and attended by Fred Barker and Richard Evans. The group is part of the response from NDA and LLWR Ltd to the clearly expressed concerns of NuLeAF and local authorities regarding the failure of NDA to inspire public confidence in the implementation of Government LLW policy.

NDA has committed to a 6-9 month project to further develop the strategy for VLLW and LALLW including an assessment of arisings, need and capacity; how to accommodate different needs in different parts of the country; use of VLLW in construction of the LLW Repository (LLWR) cap; assessment of potential for on-site/near-site disposal at Sellafield; and understanding of how on-site disposal affects ability to clear sites.

The main issues discussed were:

Assessment of capacity versus need: LLWR are making good progress in their analysis, the output of which will be useful to both developers and planning authorities. Some engagement with the supply chain has been undertaken which has focussed on the profile of projected waste arisings. The study is also looking at existing site permits, when these expire and whether they are likely to be extended. The central challenge is to assess the variations in the waste stream over time, how this matches capacity and what options are likely to be available for disposal.

The assessment will draw on the 2013 Radioactive Waste Inventory (RWI) but will provide more detail, particularly in terms of the phasing issue. It is expected that a draft report on the study will be available by the end of November 2012.

Sellafield Project: Sellafield Ltd is undertaking an assessment of on-site and near-site disposal options, leading to the identification of an optimal approach to LLW management. It is anticipated that around 1 million tonnes of such waste will be generated on site, far greater than for any other nuclear site in the UK. The initial assessment is that on-site options are very limited but that near-site options, particularly on the Seascale side of the site, are more promising. A report on the research is due in late October or November, the conclusions of which will be presented to the next meeting.

In parallel NDA, working with **RSRL and Magnox**, is reviewing options for other nuclear sites in the UK, excluding Dounreay which is already developing its own LLW disposal site and upon which SEPA is currently consulting. The work is on-going but the initial assessment is that for **RSRL sites** on-site disposal is not a promising option. The geology for Harwell is not suitable so there would be a need to bring in

significant amounts of material. The view is that for both Winfrith and Harwell an on-site facility would also not be compatible with future development plans. It is also felt that the small volumes of waste involved would not make the option economically viable.

For **Magnox**, a new review is taking place within the framework of the waste hierarchy. Alternatives to disposal have been considered and this has resulted in the waste stream for landfill being halved. The effect of this has been to reduce the economic case for on-site disposal, but a paper on the results will be published in early 2013.

5. Environmental Permitting and LLW Disposal

A meeting between Juliet Long of the Environment Agency (EA) and NuLeAF's Co-Directors was held in Penrith on the 31st August. Doug Ilett and Ian Parker of the EA also attended part of the meeting. Jim Cochrane of SEPA was also due to attend but was unable to owing to last-minute family circumstances, but it is hoped to hold discussions with SEPA at a future date and to continue to involve them in subsequent regular engagements.

The aims of the meeting were to:

- Support a better understanding between the Environment Agencies and NuLeAF of the respective roles of permitting and planning
- To consider how the Environment Agencies and NuLeAF can better deliver their respective responsibilities in this area, and help others to understand them
- Consider opportunities to work together to support more effective development of national strategy and implementation.

Local authority and NuLeAF concerns at the decision making processes around VLLW/LLW disposal are well understood. The aim of the discussion was to understand the Environmental Permitting Process and the role this plays in determining transport and disposal destinations for VLLW/LLW. It follows on from earlier discussions between Fred Barker and the Environment Agency.

The Environment Agency is keen to ensure that a robust waste management infrastructure continues to exist for the management of radioactive wastes, to support both nuclear decommissioning and clean-up as well as other users of radioactive substances. It has a role in supporting the NDA the development and implementation of its strategy, and is the responsible regulator for the permitting of radioactive waste disposals across England and Wales. SEPA has the equivalent role for Scotland.

There was agreement that there was a need for greater clarity on the role of the various planning organisations a engaged in wider development of policy and strategy relating to radioactive waste management (e.g. the relationship with the Planning Inspectorate and DCLG).

On this basis it was agreed that it would be useful to 'map out the landscape' of the respective organisations and decision-making bodies to help clarify respective understanding and consider any opportunities to improve engagement, and similarly to consider development of a brief on respective roles and responsibilities.

The Environment Agency outlined the **Environmental Permitting Process** and how the regime has been consolidated in recent times to create a more consistent framework. Key points are:

- In the past any permits for disposal of radioactive waste would have been for disposal at a specific site.
- However, the current process does not specify sites for disposal in this way – in the same way that the Environment Agencies permit the disposal of other forms of waste, including hazardous wastes. A permit for the transfer of radioactive waste to another site is awarded if certain criteria are met, including application of **Best Available Techniques (BAT).** However, BAT does not require the consideration of alternatives such as on-site disposal, nor does it specify transportation routes[1]. A permit for the disposal of radioactive waste at any site is awarded again, only if certain criteria are met, and in particular on the basis of the demonstration of the environmental safety for the disposal of wastes at the proposed facility[2].
- The Environment Agencies do not have the vires to require any operator to develop on-site disposal. They are duty-bound to consider any application for disposal. It was noted that any plans for on-site disposal would need approval from the **Office for Nuclear Regulation (ONR)** in accordance with the nuclear site license. The removal of a requirement to specify a disposal site makes it difficult to assess impacts on receiving communities in the waste consignors assessment of BAT. Instead the impacts on receiving communities are considered through the requirement on the landfill operator to hold the permit – the permitting process requiring local consultation.
- There is a requirement that any application for a permit to transfer waste to another sites proposes an approach that represents the BAT – this takes account of a range of criteria including impact on the environment, transport and proximity, as well as cost and practicability[3]. Given the limited options available for disposal of radioactive waste it was noted that the issues of transportation and proximity have limited influence in any determination of BAT.
- There is a requirement that the receiving community is notified by any permitted landfill operator of plans to receive waste from a new waste consignor, but there is no obligation to consult on this. Instead, the Environment Agency requires the landfill operator themselves to apply for a permit for the acceptance of radioactive waste for disposal and consults on this permitting. In other words, the permitting of the landfill does not limit the disposal to the wastes from any

[1] Guidance on BAT is available on the Environment Agency website at: http://www.environment-agency.gov.uk/business/sectors/117039.aspx - specifically the 'RSR principles of optimisation' guidance document
[2] Guidance on the Environment Agencies requirements for disposal to near-surface facilities is available at: http://www.environment-agency.gov.uk/business/sectors/99322.aspx
[3] see EA guidance on BAT and also the Nuclear Industry Code of Practice on BAT at: http://www.rwbestpractice.co.uk/PublicUsefulDocs.aspx

particular waste consignors, focusing on the ability of the landfill to manage the safe disposal of any waste that may be received. This has brought waste permitting for radioactive wastes in line with the permitting for other forms of waste. It still requires consultation at both the site of consignment and at the site of receipt.

Spatial planning for the management of radioactive wastes

The Environment Agency accepts that, despite the national strategy for LLW, there is a lack of a strategic approach to how this issue is managed.

Their view however is that the environmental permitting process is not the solution to this – it provides the technical assessment of the safety (or otherwise) of disposals. Instead it suggests that the opportunity to manage this is in the planning process.

The role of local authorities in the development of Waste Plans, and the 'Duty to Co-Operate' was then discussed. It was suggested that both the EA and NuLeAF might want to consider further how these can be developed, to help ensure that they address the provision of capacity for radioactive waste management, particularly from nuclear sites.

It was noted that the LLW policy placed the emphasis on the supply chain to provide solutions for radioactive waste management – and that again, some engagement with the supply chain would be useful. The Environment Agency suggested that it would be more productive for both organisations to work together to encourage better development of spatial planning for radioactive waste.

It was agreed there was value in both organisations continuing to meet on a regular basis (perhaps more frequently to begin with and thereafter annually) to share an oversight of our shared interest and ensure clarity of respective roles.

Agreed Actions

Two main actions were agreed:

- The EA will prepare a 'map' of the landscape of organisations and decision-making bodies that exist and which are relevant to radioactive waste management in the UK and send to NuLeAF.
- The Environment Agency and NuLeAF will develop a joint paper on the role of permitting and planning process and how these might be addressed as part of a strategic approach. It is hoped that this can feed into the 'light touch' review of the LLW strategy implementation being undertaken by NDA and the work of the various NDA groups addressing LLW. (NuLeAF to take lead in drafting paper)

It should also be noted that an officer at Northants CC is preparing a paper on the relationship between planning and permitting. This was raised at the last meeting of the Radioactive Waste Planning Group (RWPG) and this paper will be circulated to member of that Group when ready.

6. SCCORS

NuLeAF's sister body, the Scottish Councils Committee on Radioactive Substances (SCCORS) is undergoing a period of change with a new Chair and a transition of secretariat support from Dundee City Council. The first meeting of the new delegates was held in Edinburgh on 19th October. That meeting will appoint office bearers and a Secretariat as well as representatives to the various Project Boards and Working Groups on which SCCORS has places.

NuLeAF's Co-Directors have been in contact with SCCORS to discuss issues of mutual interest, such as cross-border waste transfer, and hope to convene a formal meeting towards the end of 2012. Progress on this will be reported to the Steering Group at a future meeting.