

Meeting:	NuLeAF Steering Group, 15 October 2014
Agenda Item:	5
Subject:	An update on NDA Strategy and Operations
Author:	Philip Matthews
Purpose:	To provide updates on developments in NDA Strategy and Operations

Introduction:

This report provides updates on:

- Theme Overview Groups
- Sellafield Decommissioning Strategy
- Sellafield Excellence Plan and improvement notice
- Uranics and Overseas Fuel Management

Recommendation:

This report is for noting.

Contribution to 2013/15 Service Plan:

The activities described in this report relate to the following Key Tasks:

- *Continue to monitor and advise NDA and NuLeAF membership on IWM Strategy implementation.*
- *Continue to engage NDA TOGs representing the interests of LAs.*
- *Promote engagement between NDA/SLCs and host LAs to ensure site decommissioning and waste planning is consistent with LDPs.*

1. Update on Theme Overview Group (TOG) meetings

Since the last Steering Group, NuLeAF's Executive Director has attended meetings of the Site Restoration (SR), Integrated Waste Management (IWM) and Critical Enablers (CE) Theme Overview Groups. Reports on these are provided below.

1.1 Site Restoration TOG

The SR TOG met in Penrith on the 9th September. The meeting provided updates on a wide range of work that is underway or planned. Much of this work is not yet at the stage where detailed comment or input from NuLeAF is required.

Arup has been commissioned to prepare two reports aimed at helping the NDA develop its position on managing land with no commercial benefit. The first report is intended to provide an understanding of the non-commercial land in NDA's ownership while the second will look at options for the management of that land. Arup's work is based on the use of ecosystem services model which appraises the value of landscape and other environmental resources. It also considers the social return on investment. NuLeAF's Radioactive Waste Planning Group was given early sight of the work which had been done on this at its March meeting.

At the meeting it was reported that this work was due for publication by the end of September 2014 but it is now understood these papers will be published in late October. A full briefing on the final reports will be provided as and when they are available.

Other work of interest now getting underway includes:

- A workstream that will develop NDA's **position on in situ disposal of structures**. This is expected to be discussed at SR TOG early in 2015.
- An overarching position on **optimising interim states** is being prepared and will be presented to the TOG in early 2015. This will then be used as the basis for the development of Strategic Guidance on interim states.
- A range of work on the **timing and pace of site restoration**. As a first stage of this process an independent review is being undertaken that will assess how various factors influence the pace and priority of site restoration, leading to the development of an NDA position paper and then to the issuing of Strategic Guidance.

In addition, a workshop was held in August with Magnox Ltd to discuss **options for deferred decommissioning**, looking at international experience. NDA will publish a position on the optimum timetable for dismantling of Magnox reactors but the timeframe for this is not clear.

All this work is feeding into Strategy III, due for consultation early in 2015.

1.2 IWM TOG

The IWM TOG met on the 11th of September. The meeting provided updates on progress with the Low Level Waste (LLW) and Higher Activity Waste (HAW) Strategies and on Strategy III, all of which are progressing broadly in Steering Group, Item 5, NDA Strategy & Operations, 15 October 2014

line with the original timeframe. There will be opportunities over the coming months for local government to engage with the HAW Strategy and Strategy III, and consultation on drafts of all three documents.

A new NDA report **Radioactive Wastes in the UK** was circulated to the group. This aims to provide an accessible and clear explanation of the range of wastes produced in the UK and the options for their management and disposal. It is accompanied by factsheets on specific issues and should be published by the end of 2014.

As with the CE TOG (see below), discussion centred on work that is planned or recently commenced. This includes a range of work on **Higher Activity Wastes**:

- Identification of major waste treatment opportunities for HAW intended to promote volume reduction and best management of estate wide facilities, with an emphasis on the business case for consolidation of Magnox storage and FED dissolution.
- Work on the disposal of HAW wastes, ensuring that there is an effective interface between RWM Ltd¹ and the Site Licensee Companies (SLCs) on issues such as the appropriate waste packaging solutions for long terms storage. Planned research also includes consideration of the wider implication of near surface disposal for radioactive management across the UK.
- Development of a national plan for the treatment and storage of alpha contaminated wastes and in particular of plutonium bearing wastes.
- Development of a strategic position on the long term management of graphite wastes.
- Development of research and development on the best options for orphan wastes.

The TOG will also feed into the LLW Strategy review on the issues surrounding how best the capacity at the Low Level Waste Repository (LLWR) can be used and alternative management approaches for Very Low Level Waste/Low Activity Low Level Waste (VLLW/LALLW).

1.3 Critical Enablers TOG

The CE TOG met in Penrith on the 18th September. The primary focus of the CE TOG at present is to ensure that all Critical Enablers are effectively integrated and reflected within Strategy III.

A presentation on the NDA's **People and Skills Strategy**, published in April 2014² was followed by discussion. The Strategy seeks to build partnerships between the NDA, SLCs, educational institutions, trade unions and others to ensure appropriate skills are available to deliver the NDA's mission. Important issues to be addressed include the challenges of an ageing workforce and ensuring that the right skills are in the right locations at the appropriate time.

¹ RWM is the arms length subsidiary of NDA responsible for developing the Geological Disposal Facility.

² <http://www.nda.gov.uk/publication/people-and-skills-strategy/>

For local authorities a central concern is to ensure that the maximum number of job opportunities are available to local people.

There was also a presentation from Bill Hamilton of NDA on **socio-economic issues and public and stakeholder engagement**. This centred on plans for the annual NDA stakeholder event, which will be held in Birmingham on the 29th October and will be followed on the 30th October by an RWM run event for stakeholders on the Geological Disposal Facility (GDF) process. NuLeAF's Chair and Executive Director will attend these events. NDA is also looking at new ways to engage with stakeholders around socio-economic issues.

A presentation was also made by John Mathieson the Head of International Relations for the NDA. This focussed on the NDA's **International Relations Strategy** and how international work was being integrated into Strategy III. NDA has developed bilateral relations with nuclear decommissioning organisations across Europe, North America and Asia. Key areas of work include assistance to the Japanese Government in responding to Fukushima; efforts to boost sales of decommissioning technology and expertise across the world; and the sharing of learning with other countries around approaches to decommissioning and disposal of wastes.

2. Sellafield Decommissioning Strategy

A meeting to review the credible options for the Sellafield Decommissioning Strategy was held near Workington on the 4th September. Around 40 stakeholders drawn from Sellafield Ltd, the NDA, regulators and local government attended, with representation from NuLeAF along with Copeland Borough and Cumbria County Councils.

The meeting represented the second stage of the Strategy Review – an earlier meeting had been held on the 12th June. No local government stakeholders were invited to that and it was only through lobbying from NuLeAF that local government participation in the second workshop was agreed.

Much of the day involved small group work reviewing a range of credible options that had been put forward for the decommissioning of the Sellafield site. These options varied in terms of end state assumptions, interim states, alternatives ways of prioritising action and the pace of delivery. Options ranged from the rapid clearance of all waste and facilities on site to, at the other extreme, options that envisaged most or all of the facilities be left in situ permanently.

Each group undertook a SWOT analysis of the identified options, assessing pros and cons and also whether options could be combined.

There was a clear rejection of options that proposed facilities and waste be left on site permanently, with this being viewed as unacceptable in terms of environmental impact. There was more debate and disagreement about the

most desirable pace of site clearance, in that some were keen to see the site cleared as soon as possible, while others supported a slower pace to maintain employment.

The workshop outputs will be used to inform a set of Credible Strategic Options to be published in October 2014 as part of the Sellafield Decommissioning Strategy Stage A.

3. Sellafield Excellence Plan and improvement notice

Sellafield's **Excellence Plan** was published in September 2014³ with the intention of setting out a path to improved performance following considerable criticism over recent years. The Excellence Plan is intended to support delivery of the Sellafield Ltd Strategy through focussing on areas that need addressing. These are:

- Safer performance through improved performance in operations, maintenance and engineering
- Getting Best Value from the supply chain
- Better financial and schedule performance through improved project predictability
- Improving equipment reliability and the state of assets to lead to fewer unplanned outages
- Ensuring that people with the right skills are in the right place at the right time and supported by better leadership and more effective work planning.

Also, at the start of September ONR agreed to extend to 31 August 2015 the **improvement notice** issued to Sellafield in November 2013. This was served as a result of shortfalls, identified by Sellafield Limited, in the level of radiation protection provided to employees and others, during operations at the sites Fuel Handling Plant. Sellafield Ltd is now required to complete their Improvement Programme by the end of August next year.

4. Update on Uranics and Overseas Fuel Management

In May NuLeAF submitted comments and questions to DECC and NDA on their respective position papers on (a) the management of overseas nuclear fuels held in the UK and (b) the high level credible options for the future management of materials containing uranium (termed *uranics*)⁴.

NuLeAF's Executive Director held a discussion with Danny Fox, Sam Fox and Paul Gregson of NDA on the 29th July to review and respond to NuLeAF's comments.

4.1 Overseas fuel

NuLeAF posed five questions regarding overseas nuclear fuel. These are set out below along with the NDA response.

³ http://www.sellafieldsites.com/wp-content/uploads/2014/09/Exc_plan_Med-res.pdf

⁴ <http://www.nda.gov.uk/documents/upload/Uranics-Credible-Options-Summary-Gate-A.pdf>.

1. It was noted that the consultation document includes no information on actual costs. What is the actual assessed financial impact of the proposals? *The NDA's response is that the paper was a consultation on a policy document, not a business case. All cost data is commercially confidential but NDA will strive to ensure best value.*

2. Have all the options for completing overseas contracts been fully considered? NDA say overseas reprocessing was considered but ruled out because of transportation and materials repackaging costs. However in some instances repackaging may be needed for transportation within the UK, and to meet NDA geological disposability requirements. Are there other UK facilities that could offer a materials processing option to enable some or all of these overseas contracts to be completed? *Repackaging may indeed be needed in the UK so NuLeAF is correct in that. However it will not be cost effective to package for overseas and given the small amounts involved reprocessing isn't an option. Instead the materials will be stored for disposal. No other UK facilities could take it as the Dounreay facilities have closed and THORP is due to close in the next few years.*

3. Will the decommissioning and clean-up programme at Sellafield be impacted by continued overseas materials storage pending disposal to a GDF? The volume of materials may be relatively small but presumably there will be an opportunity cost. Assuming NDA is to continue working within existing budgets, will any planned decommissioning and clean-up work not now be done, or deferred, as a result of retaining overseas nuclear fuels on the Sellafield site? *Yes. Decommissioning and clean-up will be impacted but in a positive sense. Keeping THORP running would be a major distraction and by not pursuing that option resources are available for other action that will benefit Sellafield.*

4. Will any plutonium be added to the UK civil stockpile, and what materials have, or will, be offered in exchanged? *Through this consultation nothing will be added to the UK Pu stockpile but material is being added through the actions outlined in the Plutonium Strategy.*

5. The consultation document advises approximately two tonnes of material is currently held at Dounreay and will need to be transferred to Sellafield to enable Dounreay site decommissioning to progress. What are the assessed impacts of this transfer? Have the implications of potential Scottish referendum outcomes been assessed? The consultation is silent on these issues. *The implications of a 'yes' vote have been considered and plans are in place if that eventuality arises.*

4.2 Uranics

Regarding **uranics**, these materials largely comprise uranium hexafluoride tails (from nuclear fuel manufacture), Magnox depleted uranium (from uranium enrichment processing), and THORP product uranium, and exist in several forms (including metals, powders, pellets) at Capenhurst, Dounreay, Harwell, Springfields, Sellafield and Winfrith. About 98% of this inventory (by

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weight) is at the Capenhurst enrichment plant (26,000 tonnes depleted uranium and 20,500 tonnes uranium hexafluoride tails). About 900 tonnes of uranium hexafluoride tails are stored at Springfields and 300 tonnes of THORP product is held at Sellafield (though this should be returned to THORP customers under existing contracts). Small quantities of materials are held at Dounreay, Harwell and Winfrith.

Identified options are continued storage, recycling, or disposal. NDA notes that *"Given the variety of types of uranics, we anticipate that no single strategic option will be suitable for the entire uranics inventory."* Their overall approach is to consolidate such material on sites that have a long lifetime such as Capenhurst, Sellafield and Springfield and away from sites such as Harwell.

A total of 80000m³ of Uranics is included in the inventory – this is considerably more than NDA has but recognises the contribution of URENCO which could generate 5000m³ per annum. Uranics are radioactive for billions of years so disposal in the Geological Disposal Facility (GDF) might not be a solution, although there may be a case for the use of Uranics in a GDF to benefit the disposal of other wastes such as spent fuel. The NDA are therefore looking at alternative disposal options.

The NDA notes that *'There has been very little public reaction following publication of our Uranics Credible Options paper, which may be because implementation of the strategy is a continuation of established, well understood practices and does not involve new activities at any of our sites. As stated in the paper, we will discuss the options with any affected stakeholders before taking a decision when we have enough information to make a strategic decision for a particular class of material. As such, we will continue to monitor our own and our contractors and subsidiaries' plans for stakeholder engagement and will ensure that opportunities for the inclusion of uranics-related discussions are taken wherever possible'.*