

Meeting:	NuLeAF Steering Group, 7 June 2016
Agenda Item:	7
Subject:	Update on developments in NDA strategy and operations
Author:	Philip Matthews
Purpose:	To update on developments in NDA Strategy and Operations

Introduction:

This report provides a report on recent developments in NDA Strategy and operations. It covers:

- Theme Overview Group updates;
- Higher Activity Waste Strategy published;
- Meeting on Guidance on Requirements for Release of Nuclear Sites from Radioactive Substances Regulation (GRR); and
- E-Learning Module on Low Level Radioactive Waste

Recommendation:

This report is for noting.

1. Theme Overview Group (TOG) Updates

A **Site Decommissioning and Restoration (SDR)** Theme Overview Group (TOG) was held in Penrith on the 15th March. The meeting discussed a number of topics including:

- Decision making processes that will guide the pace and priority of NDA projects and programmes.
- Work planning to take forward actions outlined in Strategy III and the NDA Business Plan, and the development of effective indicators to monitor progress.

With regard to the former, it was noted that the Values Framework would help guide the identification of priority projects and programmes, with the pace of these programmes being determined by constraints such as cost and an assessment of the benefits and disadvantages of immediate or delayed action.

Of particular interest in terms of Strategy III was a discussion around NDA's three pilot sites for more rapid decommissioning, namely Trawsfynydd, Dounreay and Winfrith. This work has clear links to the current work of the Environment Agencies on regulatory control (Items 3 and 4 in this paper).

An **Integrated Waste Management (IWM) TOG** took place on the 11th April. The meeting discussed a number of significant topics including the launch of the **Low Level Waste Strategy** and the **Higher Activity Waste Strategy** and the scope for managing radioactive wastes based on an assessment of disposability rather than their classification.

There was also a detailed update on work undertaken by Low Level Waste Repository Ltd (LLWR) on the **National Low Level Waste (LLW) Programme**. In 2015/16, 89% of material was diverted from the LLWR, with a number of particular successes. Some issues around boundary wastes (i.e. those close to the boundary between LLW and ILW) had arisen which in turn had prompted the commissioning of a study of LLW/ILW boundary wastes which aims to achieve a better understanding of this area and define what is / isn't acceptable to be taken by LLWR. LLWR is also looking at the range of approaches used internationally to classify radioactive wastes and will engage with stakeholders to understand the advantages, disadvantages and implications of each approach for the UK.

For security reasons, NuLeAF is not able to participate in meetings of the **Spent Nuclear Fuels/Nuclear Materials (SNF/NM) TOG**. However, Danny Fox, Head of Nuclear Fuel Cycle at NDA, has provided NuLeAF's Executive Director with an update on work in this area.

Regarding the overall picture on Spent Nuclear Fuel and Nuclear Materials, the recently published NDA Strategy III provides a good overview of the current situation and forward plans. However the TOG has been considering a range of particular issues including:

THORP is on track to finish commercial operations in 2018 as planned. THORP has reprocessed over 4200 tonnes from overseas. There are still plans to reprocess 120 tonnes before it closes leaving less than 30 tonnes. Danny has recently met the West Cumbria SSG to discuss this issue with them.

The **Magnox Operating Plan (MoP)** is on track to finish by 2020 but the view of NDA is that it might not now be practical to reprocess all the fuel. This won't affect individual sites as all the material will still be taken to Sellafield. The NDA is looking at options to be able to manage any remnant fuels which might be leftover when reprocessing is expected to be concluded at the end of the decade.

There is 31 tonnes of fuel in **Dounreay** and progress has not been as good as hoped on removing this fuel from the site. NDA strategy is to move all of this fuel to Sellafield and reprocess as much as practicable as part of MoP. The remaining irradiated fuels which are part of the Dounreay exotics are expected to be at Sellafield by 2024, later than initially planned.

Parallel to the MoP, the NDA has been working with EDF Energy and others to develop an **Advanced Gas-cooled Reactor (AGR) Operating Programme** to prepare for the defueling of the AGR stations in the 2020s. An oversight panel has been established, chaired by DECC, termed the **Advanced Gas-cooled Reactor (AGR) Defuelling Steering Panel**. This will develop plans for the management of material from the AGR reactors operated by EDF, as they move towards the end of their lives and involves NDA, EDF and DECC.

The UK Government is currently considering NDA advice on options for the management of **Plutonium** including the reuse as MOX fuel and the development of immobilisation technology. NDA expects to provide future updates later in the year recognising a period of *purdah* exists around the Euro Referendum.

On **Uranics**, a facility to manage the UF₆ tails is under development at Capenhurst, with the start of hex de-conversion expected around 2020. More widely NDA is considering all options for Uranics including the possibility of return to the fuel cycle and potential disposal.

2. Higher Activity Waste (HAW Strategy) published

The NDA's Higher Activity Waste Strategy was published on May 16th. The overall aim of the strategy is to convert the UK's HAW inventory into a form that can be safely and securely stored for many decades, prior to disposal in a Geological Disposal Facility.

While there are well established plans for the management of HAW across the NDA estate, the Strategy is intended to progress these plans and to:

- Identify and promote good practice
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- Give guidance and leadership in key strategic areas
- Pursue opportunities to make overall improvements

The Strategy can be viewed here¹.

3. Meeting on Guidance on Requirements for Release of Nuclear Sites from Radioactive Substances Regulation (GRR)

NDA and the Environment Agencies hosted a meeting in Manchester on the 17th May, focussed on their joint work on potential changes to the regulatory regime for nuclear sites. The meeting was well attended with representatives from many of the Site Stakeholder Groups (SSGs) along with NuLeAF and some local authority planners.

The meeting focussed on three related areas:

- The work being led by the Environment Agencies in developing guidance for the release of sites from formal regulatory control (GRR).
- The joint working group on Proportionate Regulatory Controls (PRC) involving DECC, the NDA and regulators, which is considering the scope for changes in the control regime as it applies to the final stages of decommissioning.
- Learning from the experience of 3 NDA sites (Trawsfynydd, Dounreay and Winfrith) which have been designated 'Lead and Learn' and where the process of moving to optimised end states is being piloted.

The combined aim of these workstreams is to deliver a seamless process of regulation and oversight for the whole process through which sites move towards their end state and on to next planned use. In some cases parts of sites may be released early for use by the community.

Underpinning this is the development of 'optimised end states' for all NDA sites. This seeks a balanced approach where different options e.g. complete site clearance or leaving some waste in situ, are assessed against a range of criteria including:

- Cost
- Environmental impact
- Socio-economics
- Impact on existing waste facilities
- Potential to make sites available sooner

NDA is preparing guidance for Site Licence Companies (SLCs) on the optimisation of end states, and the work on PRC and GRR is intended to ensure a flexible regulatory regime that, as far as possible, does not restrict or delay next planned use.

NuLeAF, through both the Steering Group and Radioactive Waste Planning Group, has been actively engaged in discussions on the first two of these work areas, and submitted a detailed response to the UK Environment

¹ <https://www.gov.uk/government/publications/nda-higher-activity-waste-strategy>

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Agencies consultation on draft guidance which closed on May 9th. NuLeAF's response to the consultation is available on the website².

In NuLeAF's consultation it was stressed that any changes to the regulatory regime need to be done in a way which does not compromise safety or adversely affect next planned use. It was also stressed that the planning system has significant limitations in terms of providing regulation of sites, and that local authorities do not necessarily have the finance or capacity to take on certain functions. Many of these points were echoed by others at the meeting.

Finally, the experience of the 3 'Lead and Learn' NDA sites (Trawsfynydd, Dounreay and Winfrith) may be of interest to NuLeAF members. If members wish, NuLeAF can explore the scope for a presentation or possibly a site visit to one of the two sites in England and Wales.

4. E-Learning Module on Low Level Radioactive Waste

The LLWR National Waste Programme has recently launched an online E-learning module: Introduction to Low Level Radioactive Waste. The module is free of charge and open to everyone. It covers what solid LLW is and where it arises; LLW management principles and good practice, waste treatment and disposal routes; and the legislative framework and can be found here³.

² <http://www.nuleaf.org.uk/document-library/consultation-responses/consultation-responses-2016>

³ https://www.nucleartrainingnetwork.com/mod/advancedsearch/detailed_view.php?id=180