Meeting:	NuLeAF Steering Group, 11th July 2013
Agenda Item:	5
Subject:	NDA Strategy and Operations
Author:	Stewart Kemp
Purpose:	To provide an update on developments in NDA Strategy and Operations

Introduction:

This report covers:

- Publication of NDA Report and Accounts 2012/2013
- Comments to NDA on consolidation of Intermediate Level Waste (ILW) storage in England and Wales
- Comments to NDA on consolidation of Fuel Element Debris (FED) treatment facilities at Magnox sites
- Disposal of NDA Non Commercial Assets
- Magnox and RSRL PBO competition
- NDA Theme Overview Groups (TOGs)
- NDA Stakeholder Engagement

Recommendation:

The report is for noting.

Contribution to 2012/13 Service Plan:

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

Identify key issues for members resulting from NDA Strategy implementation including PBO competitions, community benefits, and waste storage consolidation proposals.

Maximise local authority consultative opportunities through our engagement with the IWM and Site Restoration TOGs and advise members when new opportunities arise.

1. Publication of NDA Report and Accounts 2012/2013

In June NDA published its 2012/2013 Annual Report and Accounts (ARAC) revealing its estate wide discounted decommissioning costs had risen in the last 12 months to "…a potential range from £54.6bn to £63.8bn…" depending largely on future Treasury discount rates. This compares with £53bn (as reported in the 2011 ARAC) and £49bn (reported in the 2010 ARAC).

All the additional liability, over £2bn, derives from identification of increased costs at Sellafield (apart from £3m attributed to International Nuclear Services Ltd which provides international nuclear transport services). The ARAC also points to many achievements throughout the past year including savings made across many sites, as well as challenges ahead. The full report can be downloaded at: http://www.nda.gov.uk/news/arac-2011-2012.cfm.

2. Response on Intermediate Level Waste (ILW) storage in England and Wales

NDA reported on their proposals to consolidate storage of wastes, fuels and nuclear materials at the NuLeAF Seminar on 9 March 2012. NDA identified the business benefits of consolidation as 1) enabling early site clearance, 2) reduction in site 'footprint', 3) reductions in hazard, risk and security levels, and 4) infrastructure optimisation.

Last year NuLeAF also responded briefly to the invitation to comment on credible options for consolidating ILW storage in Central and Southern Scotland[1]. The ILW Storage credible options paper, and the FED credible options paper below at item 3, are the latest NDA identified options for consolidation and optimisation of waste storage and treatment facilities.

The current 'baseline' plan for storage of ILW operational wastes is retrieval, packaging and storage at the point of origin on either Magnox or EDF sites. NDA propose a number of options for consolidating interim ILW storage at fewer sites in purpose built stores that provide weather protection and some shielding additional to the primary containment.

Initially Magnox Ltd identified 22 feasible siting options for interim ILW storage which were subject to screening against 'relevant safety and environmental factors' principally identified as construction and transportation impacts. This screening exercise included a Magnox convened workshop in February this year attended by a number of representatives from NuLeAF member authorities. This workshop identified factors that assisted NDA in reducing its long list of 22 feasible options to 8 credible options. Workshop

[1] Comments on NDA consultation re credible options for storage of ILW in Central and Southern Scotland.

participants indicated a "…strong preference for Magnox and EDF Energy to work together on interim ILW storage."

The NDA reports: "In summary, the options being rejected at this stage all involved transferring Hinkley Point 'A' waste to another single site location." Hinkley 'A' holds the highest number of ILW waste packages and transferring these would result in "…relatively high disturbance to local stakeholders and relative to other options under consideration, increased public dose and conventional safety risk from transport…". NDA considers: "…it is preferable to transfer wastes from sites with small volumes to sites with larger volumes than the other way round." NDA say that their preference for retaining Hinkley 'A' wastes on site would not foreclose consolidation of waste storage with Hinkley 'B', nor impact on the proposed Hinkley 'C'.

NDA then undertook further sensitivity analysis which indicated that 4 of the 8 options remained credible only if EDF sites were included, but inclusion of EDF sites depended on compliance with Magnox packaging requirements within the timescale to which Magnox sites are working. These factors remain uncertain. Therefore, NDA decided: "The shortlist that will be taken forward will be based on Magnox-only considerations, but where options on that shortlist are compatible with options on the Scenario 2 shortlist (combined Magnox and EDF sites) this is highlighted. The issue of a shared approach will then be considered further in Stage B of this process." The four 'Magnox-only' credible options are identified as follows:

1) Continue with the baseline policy position of storage at site of origin
2) Remove Dungeness A ILW to either Bradwell and/or Sizewell A
3) Remove Oldbury wastes to Berkeley
4) Remove Dungeness A ILW to either Bradwell and/or Sizewell A, and remove Oldbury wastes to Berkeley

Further consideration will be given to the combined Magnox and EDF interim ILW storage options at the next stage of NDA's strategy management system (i.e. Stage B - preferred options).

NDA invited comments on four Magnox-only ILW storage credible options and a draft NuLeAF response was considered at the NuLeAF Radioactive Waste Planning Officers meeting on 5 June. Following the meeting the NuLeAF draft was amended to absorb comments and the response[2] was submitted.

NuLeAF also received copies of the responses to NDA from Kent County Council, South Gloucestershire Council and Nuclear Free Local Authorities. Like NuLeAF, Kent broadly supported the NDA's approach though opposed

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ILW credible options June 2013.pdf

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any options that would require transfer of ILW from outside Kent for storage at Dungeness. NFLAs broadly opposed any ILW waste storage consolidation involving transfers between different sites, though accepted consolidation of wastes at sites with A and B stations as this broadly complied with the 'proximity' principle and avoided nuclear waste transportation. South Gloucestershire's main concern was the inadequacy of engagement by Magnox Ltd and NDA with the communities and councils that may be affected by the options. South Gloucestershire also pointed to its emerging core strategy that requires strong justification for any storage of wastes at Oldbury and for demonstrable environmental, social and economic benefits to offset negative impacts. South Gloucestershire also pointed out that 'appropriate packages of community benefits provided by the developer will be sought to offset and compensate the community for the burden and disturbance imposed…' by hosting any waste storage facility.

NDA say they will consider all comments received before identifying 'Stage B' preferred options for ILW storage. A further options assessment workshop involving NuLeAF members and other stakeholders has been arranged for 18-19 July. An Executive Co Director intends to join this workshop. NDA say that preferred options will then be published in November 2013 with a decision on option/s to be developed in March 2014. NDA say they recognise that further stakeholder engagement would be necessary in relation to any planning and regulatory applications.

3. Response on Fuel Element Debris (FED) treatment at Magnox site

Magnox Limited is reviewing the case for consolidating the treatment of Magnox FED through the use of shared facilities. FED wastes arise from stripping parts of Magnox spent fuel rod casings before shipment to Sellafield for reprocessing. NDA considers the best practicable environmental option for FED management is dissolution in acid to make wastes non-reactive (more stable) and to reduce waste volumes (by a factor of 20) for on-going interim storage as ILW.

Sizable FED stocks have arisen at Bradwell, Dungeness, Berkeley, Hunterston, Trawsfynydd, Hinkley 'A', Oldbury and Sizewell 'A' sites. Bradwell is constructing its own dissolution plant and Dungeness has completed dissolution of its FED wastes through an on-site plant. These sites have been excluded by NDA from further consideration.

Due to construction of interim storage facilities at Berkeley, Hunterston and Trawsfynydd, and some contamination of FED and mixing with other wastes, NDA does not propose to dissolve these stocks. It will be conditioned and stored on site. Therefore the current NDA credible options paper only considers optimisation of dissolution plant siting at 3 Magnox sites - Hinkley 'A', Oldbury and Sizewell 'A'.

A long list of 15 feasible options was considered at a Magnox workshop in February this year attended by representatives from NuLeAF member authorities. Workshop participants raised questions about utilisation of existing facilities at Dungeness or new facilities at Bradwell. However, in both cases these options were resisted by NDA as both sites were being prepared for care and maintenance (C&M), pending final decommissioning. NDA argued that maintaining FED dissolution at either Bradwell or Dungeness would disrupt transition to C&M.

On the basis that it was better to move smaller waste volumes to sites holding larger waste volumes for treatment, all options for treatment at Hinkley, Oldbury and Sizewell were considered 'credible' except those which involved transferring larger FED volumes from Hinkley to other sites. This left 9 remaining credible options as follows:

1) Continue with the 'baseline' policy position, as now, of treatment at point of origin
2) As above but process Sizewell A FED through existing Dungeness plant (despite above comments)
3) Process Oldbury FED at Hinkley
4) Process Sizewell FED at Hinkley
5) Process Oldbury and Sizewell FED at Dungeness through a new plant
6) Process Sizewell FED at Oldbury
7) Process Oldbury FED at Sizewell
8) Process Oldbury FED at Hinkley and Sizewell FED at Dungeness using existing plant
9) Process Oldbury and Sizewell FED at Hinkley

NDA invited comments on its FED Treatment Credible Options paper and a draft NuLeAF response was considered at the NuLeAF Radioactive Waste Planning Officers meeting on 5 June. Following the meeting the NuLeAF draft was amended to absorb comments and the response[3] was submitted.

NuLeAF also received copies of the responses to NDA from Kent County Council, South Gloucestershire Council and Nuclear Free Local Authorities (NFLA). South Gloucestershire's main points have been referred to above. Kent broadly supported the NDA's approach though opposed any options that would require recommissioning of the existing FED treatment plant at Dungeness, or a new FED treatment plant at Dungeness. On national planning policy grounds Kent also opposed transportation of FED wastes to Dungeness from other sites and argued communities should take more responsibility for their own wastes. Like NFLA, Kent referred to FED treatment plant discharges of radioactivity and other chemicals to the marine

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environment. NFLA argued discharges dilute and disperse radioactivity within the environment whereas concentrating and containing radioactivity is less harmful. NFLA also argued that discharges militate against the UK Government achieving its OSPAR Treaty commitment which requires discharges of radioactive substances to be reduced by 2020 "…to levels where concentrations in the marine environment above historic levels … are close to zero."

NDA say they will consider all comments received before identifying preferred options for FED treatment from Hinkley, Oldbury and Sizewell. A further options assessment workshop involving NuLeAF members and other stakeholders has been arranged for 18-19 July. An Executive Co Director will join this workshop. NDA say that preferred options will be published in November 2013 with a decision on option/s to be developed in March 2014. NDA recognise that further stakeholder engagement would be necessary in relation to any planning and regulatory applications.

4. Disposal of NDA Non-Commercial Assets

The NDA owns some 2,900 hectares of land across the UK, three-quarters of this is non-designated (i.e. non-nuclear licence site) land. (Note: water bodies are not included as land e.g. Lake Trawsfynydd).

When NDA land is no longer required for site restoration activities, its strategy is to make it available for alternative uses that optimise commercial or socio-economic benefit. The majority of land transactions to date have been in order to generate income for decommissioning. However, there is recognition that some sites do not have an obvious commercial value or this does not fit with the local planning and stakeholder preferences e.g. Winfrith and Bradwell.

It is also likely given the amount of land the NDA owns, that portions of the land-holding at any of the sites may not have an obvious commercial value e.g. Trawsfynydd. NDA is therefore exploring how land may be managed or owned in the future where there is not the ability to use a conventional commercial route, for example as recreational areas and nature reserves.

NDA recognise that this is an opportunity to release land back for the benefit of the community and the environment.

NDA has started an information-gathering exercise to understand what kind of organisations may wish to own or manage this type of land and the practicalities of implementing this. Once NDA has more understanding, it would like to present its findings to NuLeAF and get our input on what steps to take next. Currently, NDA is expected to present its initial thinking at the next meeting of the NuLeAF Radioactive Waste Planning Officers Group on 5 September 2013.

NDA is keen to identify an authority willing to hold confidential discussions to help it shape its policy approach in future NDA Strategy towards the disposal of non-commercial land, and at the last Radioactive Waste Planning Officers Group meeting the representative for Dorset County Council offered to assist.

5. Magnox and RSRL Parent Body Organisation (PBO) competition

The 27 February 2013 Steering Group meeting considered correspondence between NuLeAF and NDA about engaging relevant site host communities in both the appointment of a new PBO (in this case for the Magnox and RSRL sites) and periodic performance review of existing PBOs (in this case the five yearly review of the PBO at the Sellafield site). The meeting agreed that: "officers would liaise with NDA to arrange a briefing for member authorities about a) NDA criteria for PBO selection and b) NDA approach to PBO contract performance."

Arrangements were put in hand for a seminar in Manchester on 19 June 2013 to cover both of the above matters but in the interim NDA itself organised several regional meetings for local authority representatives around Magnox and RSRL sites to engage directly with the four PBO bidding consortia. This opportunity appeared to meet the needs of Magnox and RSRL site host communities and impacted adversely on registration levels for the NuLeAF organised seminar which was subsequently cancelled.

In the circumstances officers will continue to monitor and report on progress with the Magnox and RSRL PBO competition process and with relevant PBO developments at other NDA sites.

In May 2013 Treasury minutes reported that Government accepted the main findings of the Public Accounts Committee (PAC) inquiry into Sellafield that was itself prompted by a National Audit Office investigation into, and report on, Sellafield PBO contract management. The Treasury Minutes confirm:

- By 2014 improved benchmarking of the Sellafield Lifetime Plan be achieved;
- By October 2013 the Government's Major Projects Authority to begin reviewing the management of the largest and most critical Sellafield site contracts, and report publicly on findings;
- By October 2015, the NDA and Sellafield Ltd to begin to transfer financial risks of contract under performance from taxpayers to contractors;
- By December 2013 the National Audit Office to review the basis of calculations by the Sellafield site PBO for claimed levels of savings achieved against the baseline PBO contract;
- That PBO contract payments by the NDA be based on value delivered, not failure to deliver; and

- By April 2014 the NDA and Sellafield Ltd set out what added value can be achieved from taxpayer investment in Sellafield, and set performance targets for contributing to the development of the regional and national economy and workforce.

6. NDA Theme Overview Groups

NuLeAF officers attended meetings of the Site Restoration Theme Overview Group (SR TOG) on 7 May 2013 and the Integrated Waste Management Theme Overview Group (IWM TOG) on 9 May 2013. These 'TOGs' were created to aide NDA strategy implementation.
Key points of interest for NuLeAF from the SR TOG meeting on 7 May included:

- The Environment Agency made two presentations on international site restoration programmes that it engaged with through the OECD's Nuclear Energy Agency and the UN's International Atomic Energy Agency. Both involved the identification of best international decommissioning practice. The NEA/OECD work aims to identify Global nuclear liabilities and an action plan to address them. A key international issue remains where decommissioning wastes (and other wastes) will eventually go. An interesting project was reported from China where a plan exists to get from power plant shutdown to a final 'site end state' within 10 years. In this example, the 'End State' will be a 'museum' - basically a defueled and decontaminated power station open to the public.
- The Environment Agency also reported that they had let a small contract to identify decommissioning 'key performance indicators' (KPIs) based on UK and overseas experience.
- A discussion of priority issues for reviewing current Government decommissioning policy. This included a need to reconcile existing policy with: the Energy Act 2004; the Office of Nuclear Regulations own delicensing policy; the interface between regulations and regulators; differences between policy in E&W and Scotland; the intent of decommissioning policy (currently driven by Treasury discounting practice); and reconciliation with the current lack of a final disposal route for higher activity wastes (i.e. GDF).
- A discussion of priority areas for the SR TOG itself to address at future meetings. These were identified as: describing the process for defining site 'end states'; reviewing Government site delicensing policy; completion of NDA's review of 'credible' reuses for NDA land; defining 'interim site end states'; determining the pace and priority of Ponds and Silos clean up at Sellafield; identifying strategic goals; identifying communications requirements – and for what purposes?; identifying supply chain and skills to support decommissioning and site restoration; and asset management.

Key points of interest for NuLeAF from the IWM TOG on 9 May included:

- A detailed presentation from RWMD about the role of waste packaging in GDF post closure safety. The thrust of the argument was that in the near term (first 1,000 years) waste packaging significantly contributes to containment of radionuclides but after 1,000 years the main barrier will be the host rock. Given the return of nuclides to the biosphere is not expected for many tens of '000s of years, the question asked was 'Why spend a lot of money on 'gold plated' waste packaging?' The response of course was because modelling might be hopelessly wrong, stakeholder confidence would be damaged if waste containment specifications were reduced, and RWMD needs to make a safety case to regulators - providing confidence that, at least for first 1,000 years, packaging containment will not fail. The meeting agreed that there was no 'one size fits all' with many different waste streams - some containing radionuclides with short half-lives (tens of years) and some longer e.g. U238 circa 4.5 billion years. Discussion also included the question about the point at which modelling becomes meaningless because the distant future is too uncertain. The 'bottom line' was that with time (many tens of thousands of years on RWMD's mean assumption) what hasn't decayed away will find pathways back to the biosphere and it was better to acknowledge this in public discourse (as it is already acknowledged in industry and regulator discourse). NuLeAF's contribution to this discussion was a plea to RWMD to talk to other disciplines that model future evolution to demonstrate uncertainty and risk is universal, and not just a problem for RWMD.
- A presentation about 'orphaned wastes' - those that currently do not have a defined conditioning and packaging route. RWMD presented a number of recommendations to minimise and tackle problems through waste sorting and segregation, centralised and mobile treatment facilities; and waste avoidance. An issue for NDA is to decide what needs treating and packaging in the near term and where to invest in new treatment plant. No decisions but agreed that RWMD research would assist NDA IWM decision making.
- A final discussion was around NDA's draft position statement on graphite management. The outcome was a decision not to encapsulate operational graphite wastes now because the balance of pros and cons may change in future and current policy of disposal to a GDF (in England & Wales) might change, as might the balance of pros and cons around eventual surface/shallow disposal in Scotland. For decommissioning graphite wastes, arising some decades hence, a decision now is not needed and NDA will stick with its current baseline - eventual disposal to a GDF - but this too could change.

A further joint SR and IWM TOGs meeting was held on 27 June 2013, but this raised no new issues for either sites restoration or integrated waste management. The purpose was to consider the alignment of the two programmes e.g. timing of decommissioning and availability of disposal routes, asset disposal and land requirement for treatment and storage facilities, alignment of developing 'road maps' for both programmes, and how far to clean up a site and the resulting waste arising for treatment, storage

and disposal. (NuLeAF had previously helped NDA shape its outline site restoration 'road map' proposal and the scope of the issues to be covered.)

The Arup consultancy has now been commissioned to develop the road maps for both site restoration and integrated waste management and the target date for completion of a combined road map is end FY 2013/14. One of the key purposes of the road map is to identify future development at NDA sites and required planning consents.

The meeting also considered the information needs for strategic environmental assessment and for planning authorities and recognised NDA would need to consult widely to initially scope the content for SEA.

The meeting concluded with a discussion of 'threats and opportunities' and identified a need for a national higher activity waste management policy (covering NDA, EDF and MOD waste arisings) to mirror the existing low level waste management policy. Government would need to lead on this.

The meeting also recognised the threat to integrated programme development from inadequate stakeholder engagement. As one NDA representative put it: "Are we cascading back to stakeholders the reasoning for integrated clean up?" At present the answer is 'no'. NuLeAF urged development of a 'road map' to integrate and bring visibility to all the major NDA work themes (site restoration, IWM, nuclear materials and spent fuel management, as well as the critical enablers required to deliver these programmes). The Executive Co-Directors will take this issue into their discussions about stakeholder engagement with NDA's communications director and head of stakeholder (see next section below).

Finally, over the past 12 months NuLeAF has pressed NDA for representation on the Nuclear Materials and Spent Fuels Theme Overview Group. At the above meeting on 27 June NuLeAF was informed that representation would not be possible, due to security sensitivities around discussions, and the lack of security clearance for NuLeAF staff.

A new Critical Enablers Theme Overview Group is expected to be initiated in September 2013 and NDA confirmed that NuLeAF will be invited to join.

7. NDA Stakeholder Engagement

Stakeholder Survey

Earlier this year, in consultation with the then Chair and Vice Chair, NuLeAF officers responded to the NDA's annual 'online' stakeholder survey. Since

then officers have chased NDA for survey results and in May were provided with the report[4].

Note this report provides quantitative information only and does not capture NuLeAF or any other qualitative feedback (which NDA invited through its online survey). In fact NuLeAF provided significant qualitative feedback to NDA on its engagement practice and concluded its response saying:

"Generally, we find 'Survey Monkey' an inappropriate tool for NDA to use to engage with its stakeholder community on complex issues. We recognise it is a small part of NDA's PSE work, but nonetheless, in NuLeAF's view, asking stakeholders to "Please take just a few minutes to complete this quick survey and let us know how you think we are getting on" signals a superficial commitment to PSE.

In NuLeAF's view NDA should be asking itself and its stakeholders how it can improve its stakeholder performance. Establishment of an independent advisory panel is one mechanism that might help: strengthen NDA's internal advice; maintain PSE standards; and help shape programme delivery to ensure high levels of public confidence are maintained. Establishment of an independent 'stakeholder council' to provide expert advice, help NDA develop its approach to stakeholder engagement, periodically independently survey stakeholders on their engagement experience, and annually audit and publicly report on NDA's stakeholder practice, is another option NDA could consider to signal the value it attaches to stakeholder engagement. NuLeAF would welcome the opportunity to explore these options further with NDA."

NuLeAF officers are now pursuing these points with NDA and met with NDA's Communications Director and Head of Stakeholder Relations on 4 July. Feedback from this meeting will be reported verbally to the NuLeAF Steering Group meeting.

Engagement Plans

In June NDA published revised engagements plans for each of its major work themes. These revised plans indicated, inter alia:

- For site restoration: publication in the third quarter (Q3) of the current financial year for comment 'perspective of Credible Options for near term reuse of NDA land', and in Q4 publish a site restoration road map.
- For integrated waste management: publication in Q2 of position statements for higher activity waste treatment and possibly higher activity waste storage, and publication of a strategy position for the long term management of graphite.

[4] NDA Stakeholder Survey response (v2).

- For spent fuel: publication in Q2 of a Magnox strategy contingency position paper, and consultation on THORP contracts flexibility.
- For nuclear materials: ongoing one to one engagement with government, regulators and local authorities on policy development for plutonium management, and in Q2, publication of a Uranics credible options paper (now 18 months overdue).
- For critical enablers: publication in Q4 of the 2013 UK radioactive waste inventory, and
- For general matters: in Q3 a consultation on the draft NDA business plan for FY2014-17, a National Stakeholder Engagement meeting in October, and a further stakeholder survey in December.