

Meeting:	NuLeAF Steering Group, 25 January 2011
Agenda Item:	6
Subject:	Strategies for Low Level Waste (LLW) Management
Author:	Fred Barker
Purpose:	To report on developments

Introduction

This report covers:

- issues to address in a response to proposed strategy for managing LLW from non-nuclear industries;
- an update on issues relevant to the implementation of strategy for managing LLW from the nuclear industry; and
- plans for the NuLeAF seminar on 22 March.

Recommendation

That the Steering Group delegate authority to the Chair and Vice Chair to approve a response to consultation on a strategy for managing LLW from non-nuclear industries.

Contribution to Achieving Strategic Objectives

The initiatives are intended to contribute to the achievement of the following NuLeAF objectives:

- To seek to ensure that LLW Strategy is developed and implemented in ways that can inspire local authority and public confidence.
- To encourage and assist the NDA, Site Licensee Companies and the supply chain to take full account of the role and needs of the local authority planning system in the implementation of LLW strategy.
- To encourage Waste Planning Authorities to develop policy in MWDFs on the management of LLW (and VLLW).
- To 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.

1 Consultation on a Strategy for Managing LLW from Non-Nuclear Industries (NNI)

DECC published the proposed strategy on 7 December with a deadline for comments of 8 March. The draft strategy is available on the DECC website at [Draft Strategy for NNI LLW](#).

Preliminary comments on the draft strategy are attached in the Annex to this report. Feedback from members of the Radioactive Waste Planning Group is currently being sought on the preliminary comments.

The draft strategy explains that adequate treatment and disposal capacity is available for the majority of NNI LLW. It notes that the very small volumes of NNI LLW are largely insufficient to drive the provision of bespoke management and disposal facilities via the market¹ and that, as a result, NNI LLW management has to rely on networks provided for other large volume non-nuclear wastes. Government wants to conserve existing routes and establish or expand other routes, to reduce the “fragility” of current arrangements. It wants Waste Planning Authorities (WPAs) to take account of NNI LLW disposal requirements, both in their role as consultees to the environmental regulators and when they prepare and review their local development frameworks covering waste.

The draft strategy clarifies that:

- Most LLW from the NNI is low volume VLLW (para 2.21) which is disposed of with conventional wastes to landfill and does not require permits under radioactive waste regulations. Para 2.34 states that any landfill or incinerator in the UK that is also used for municipal, commercial or industrial wastes may be accepting low volume VLLW mixed in with other wastes. It adds that it is existing policy that any such facility which has the appropriate permits from the environment agencies to accept conventional wastes, can continue to accept low volume VLLW until it is closed.
- Most high volume NNI VLLW arises from the oil and gas industries (and are wastes containing naturally occurring radioactive materials [NORM]) (para 2.36). Para 2.37 acknowledges that there is an absence of detailed information within the strategy about the amount of high volume VLLW that might arise in the future².
- Most higher activity LLW from the NNI is treated by incineration, followed by disposal of the ash as low volume VLLW, with only a minimal amount of disposal of higher activity LLW by ‘controlled burial’ (para 2.39).

It is proposed that authority be delegated to the Chair and Vice Chair to approve final comments on the draft strategy.

2 Update on issues relevant to the implementation of strategy for managing LLW from the nuclear industry

The UK Strategy for the Management of Solid LLW from the Nuclear Industry was published in August. NuLeAF’s commentary on the Strategy was published in October

¹ The exception may be high volume VLLW (NORM) wastes from the oil and gas industry.

² A second phase of consultation in 2011 will focus on the needs of those organisations that produce wastes containing NORM.

and is available on the NuLeAF website by clicking on [Briefing Paper 19](#). The emphasis in the Strategy is on:

- more effective application of the waste hierarchy and a move away from the past focus on disposal;
- making best use of existing LLW management assets, particularly the LLW Repository (LLWR) near Drigg in Cumbria; and
- the need for new fit-for-purpose waste management routes.

The NDA's LLW Strategy Group met on 24 November (and was attended by Fred Barker and Richard Evans). Key points from the meeting include:

- The **group name** is likely to be changed to the 'LLW Programme Delivery Group'.
- **Group membership** is being reviewed. Discussion is underway about potential representation from the Planning Officer Society
- Revision 2 of the NDA **LLW Management Plan** should be issued before the end of the year, with an emphasis on implementation of the waste hierarchy.
- A provisional **cost review** indicates that the total LLW management liability across all NDA sites has reduced by almost £1bn (from 2008 Lifetime Plans to 2010 Lifetime Plans).
- LLWR Ltd has published a guidance document on implementation of the **waste hierarchy** (WH) in the nuclear industry. This is available on the LLWR Ltd website at [WH Guidance](#). Consideration is to be given to producing further guidance to encourage standardised decision processes for implementing the WH at site level.
- LLWR Ltd has undertaken a review of the extent to which site **Integrated Waste Strategies** (IWSs) are aligned with national LLW Strategy. LLWR Ltd report that there is reasonable alignment, but significant variations between sites on practical application. There is some concern that for the majority of sites the stated baseline strategy is disposal to LLWR, but this often reflects a time lag between current intentions and what is stated in IWSs.
- There is also concern that in practice **Very Low Level Waste (VLLW)** is still being mixed with LLW for consignment to the LLWR (because of a lack of availability of VLLW disposal routes). Analysis of recent disposals to LLWR indicates that around 66% of it could in principle have gone to landfill.
- A detailed **study of VLLW arisings** is underway to help identify a more robust picture of management capacity needs over time (covering both on-site storage and off-site disposal). Existing facilities are being mapped to help inform assessments of further need.
- A **framework VLLW disposal contract** has been delayed because of issues over long-term liabilities and permissioning. LLWR Ltd hopes to have the framework contract in place within 6-7 months. Subject to the outcome of permissioning processes, it could include facilities at Clifton Marsh, Keekle Head, King's Cliffe and Lillyhall. Under the terms of the anticipated framework contract, LLWR Ltd envisages that additional landfill facilities with the necessary permissions could be added by successful bidders at a later date.
- LLWR Ltd has produced **draft business case guidance** for SLCs who wish to consider developing VLLW disposal facilities at existing nuclear sites. The draft is with Strategy Group members for comment.

- NDA has approved a £2m fund for this FY to help kick start the **metal treatment** market. Since April 2010, 220 tonnes of radioactively contaminated metal has been treated, with further orders of 284 tonnes. The unit price is now below that for disposal to LLWR.
- A **framework combustibles contract** was put in place in July. The first ‘batch’ contract is likely to be awarded in January. Variations to the permits of the facilities involved are being considered by the EA.
- LLWR Ltd aim to secure Department for Transport agreement to the use of ‘**soft-sided bags**’ for VLLW transport and disposal by early spring.
- LLWR Ltd are seeking to establish a **transport service** which, ultimately, could enable a move away from individual sites having to separately contract haulage companies

The Secretariat has prepared a **Case Study** on the application by Augean for planning permission to dispose of LLW to the East Northamptonshire Resource Management Facility (RMF) at King’s Cliffe. Members will recall that the application was refused on various grounds, including inconsistency with local plans and perceptions of harm. The applicant appealed and a Public Inquiry began on 26 October, 2010. The Inquiry considered a range of issues relevant to the implementation of LLW strategy, including: consistency of the application with national policy and strategy; the question of need; the role of the proximity principle; public and stakeholder engagement; and perceptions of harm as a material consideration. It is anticipated that the Secretary of State will give his decision in Spring 2011. The Case Study is available on the NuLeAF website at [CS 11](#).

It is also hoped to be able to prepare a more detailed Briefing Paper on the treatment of key questions at the Inquiry.

3 NuLeAF Seminar on LLW Management and Spatial Planning

The seminar is taking place on 22 March at LG House in London. The flyer for the seminar is available on the NuLeAF website at [Seminar Flyer](#). This sets out the objectives, agenda and registration details.

The seminar will provide an important opportunity to discuss issues associated with NuLeAF’s strategic objectives on LLW management (see first page of this report).

If you have not already done so, Steering Group members are encouraged to register for the seminar.

ANNEX: PRELIMINARY COMMENTS ON THE PROPOSED STRATEGY FOR THE MANAGEMENT OF SOLID LOW LEVEL RADIOACTIVE WASTE (LLW) FROM THE NON-NUCLEAR INDUSTRY (NNI)

Preliminary comments are in *italicised* text.

1 Data recording and collation

Section 6 of the draft strategy explains the difficulties involved in assembling comprehensive data about quantities and routes used for NNI LLW management (see in particular para 6.23).

Para 2.14 states that Government urges regulators to permit disposals to any person authorised without the need to specify particular authorised routes in environmental permits. It adds that provided waste producers record where wastes are being sent to at the time of disposal this will not result in a loss of information.

However, para 2.34 explains that in the waste disposal records which are provided to the environment agencies under the terms of their environmental permits, waste producers of low volume VLLW do not have to identify which landfill site, or incinerator, is used for disposal of this material.

Para 2.18 calls for improvements to environmental regulator databases on NNI holders of environmental permits, particularly to allow radioactive waste quantities to be calculated on an equivalent footing to conventional waste quantities. Government is keen however not to impose undue burdens on producers or regulators by imposing detailed additional record-keeping.

Section 6 of the proposed strategy shows that there is a clear need to improve databases. The call for improvements should be supported. The apparent contradiction between paras 2.14 and 2.34 should be resolved. It should perhaps be argued that waste disposal records for all types of LLW should identify which facilities are used?

2 Proximity

Para 2.15 states that for LLW Government wishes to see appropriate explicit consideration of the proximity principle when producers are deciding on appropriate disposal routes, but that this consideration should not “dominate the waste plan”.

Para 2.26 states that by implementing national policies in PPS10, WPAs should address and plan for all relevant waste streams, including LLW, and are expected to provide a framework in which communities take more responsibility for their own waste.

This emphasis is different to that in the NDA’s strategy for managing LLW from the nuclear industry, which highlights a different Key Planning Objective from PPS10, that waste should be managed in the nearest appropriate installation. For nuclear industry LLW, this reinforces a focus on the use of existing waste management capacity, even if at a considerable distance from the source of waste. In contrast, the proposed emphasis in NNI LLW strategy should re-enforce the need for more localised approaches which, it is suggested, should be welcomed.

Para 2.56 states that: “It is clear from the data collection project and the sustainability appraisal undertaken in support of the strategy, that the disposal network available to the non-nuclear industry for radioactive waste is fragile, and almost virtually non-existent in some parts of the country. This situation is inevitably leading to excessive transport of wastes from their site of production to ultimate disposal location.” See also Table 5 on p56 which summarises average distances for non-nuclear industry waste transportation within each WPA for landfill and incineration.

Government should clarify that the statement about “excessive transport” applies primarily to high volume VLLW and higher activity LLW. Should Government also be encouraged to be more explicit that it requires WPAs to address and plan for these specific waste streams (rather than low volume VLLW), and that WPAs are expected to provide a framework in which communities local to the point of generation of these wastes take more responsibility for their management? This may be more appropriate for higher activity LLW, than for high volume VLLW generated by the oil and gas industries? See also comments under ‘6’ below.

3 Limited utility of improved information provision

The draft strategy places considerable emphasis on the provision of information about radiation risks, the regulatory framework and societal needs for NNIs. Para 2.17 refers to the Government’s hope that the provision of explanatory information will go a considerable way to improving understanding, particularly on the part of those operating disposal facilities to help overcome a reluctance to accept radioactive wastes.

Although the provision of explanatory information is important, it is unlikely to be sufficient to allay public concerns about radioactive waste management, particularly in local communities where new proposals to use existing facilities, or proposals for new facilities, come forward. This is because of processes of ‘social amplification’ that can produce heightened perceptions of risk. These processes can only be ameliorated by efforts to: ensure openness and transparency; address issues of trust and confidence in the operator and regulators; increase levels of familiarity with radiation; enhance the perceived sense of control and fairness; and explain/improve levels of associated benefits. Social amplification processes are likely to be more prevalent away from nuclear sites, in communities that are unfamiliar with radioactive waste management. The current state of knowledge about perceptions of risk and how to address them is usefully summarised in Ray Kemp’s Proof of Evidence to the King’s Cliffe Inquiry (NCC8.1, PINS Ref APP/K2800/A/10/2126938/NWF). The Government should be encouraged to highlight the additional ways in which perceptions of risk may need to be addressed.

4 Consultation with local authorities during environmental permitting

Paras 2.19 and 2.37 highlight that when regulators receive applications from waste disposal facility operators to accept radioactive waste (either as high volume VLLW or as LLW), they should consult relevant local authorities.

This is welcome but these paragraphs should also highlight the importance of operators checking whether the acceptance of radioactive waste from a new consignor falls within

the terms of the relevant planning permission and discussing this with the relevant WPA if there are any doubts.

5 Decentralisation of power and planning reform

Paras 2.22-2.23 refer to the Coalition Government's intention to achieve a radical decentralisation of power and to reform the planning system to make it faster and more democratically accountable. Specific reference is made to the intention to publish a simple and consolidated 'National Planning Framework' covering all forms of development (and replacing PPSs).

The Government's intention to give local communities more influence over planning decisions underlines the importance of also making greater effort to address the social amplification processes that often lead to heightened perceptions of risk (see point 3 above).

6 Addressing NNI LLW in spatial planning and development control

Para 2.24 refers to Government policy on LLW management. This includes a "common expectation for local level plans to identify suitable sites for waste". As noted above, para 2.26 explains that WPAs should implement national policy in PPS10, addressing and planning for all relevant waste streams, including LLW.

Paras 2.29 and 2.30 add:

"The remit of waste planning authorities through planning legislation is to ensure that land proposed for a particular waste management activity is suitable for that activity. These planning decisions will be taken in the context of the development plan for the area concerned (i.e. the Local Development Frameworks covering waste). In formulating these plans, waste planning authorities take account of total waste arisings, and therefore have an interest in the waste streams that may be consigned to particular waste facilities in their area. When granting planning permission it is possible to impose a condition which broadly specifies what waste can be taken to a particular site - this may include restrictions e.g. 'household & commercial waste only', and this would effectively exclude certain other waste streams such as radioactive waste. (If this type of condition is imposed it is important to note that planning permission to vary or delete it may be required before a site can take radioactive waste)."

"Waste planning authorities should actively consider conditions which allow radioactive waste from these sources in landfill. It is the legal responsibility of the environment agencies, through the environmental permitting system to decide in detail which waste types can be taken to a particular site. In the case of facilities requiring environmental permits under radioactive waste regulations (i.e. those wishing to take high volume VLLW and LLW), local authorities should be consulted on these applications by the environment agencies, who themselves will comment on the adequacy of risk assessments supporting the applications."

Para 2.38 explains that:

“It is also to be expected that occasional applications will be made for new sites to take high volume VLLW, and such situations will clearly directly involve both the environment agencies and relevant waste planning authorities. To the extent that it is possible without having detailed information on likely arisings of high volume VLLW, and on site-specific applications for planning permission, waste planning authorities should make note in their Local Development Frameworks that disposal requirements for such wastes may arise from time-to-time. “

Para 2.40 notes:

“It must ... be assumed that an operator of any landfill or incinerator receiving directive wastes could also apply to the environment agencies to take LLW under radioactive waste regulations. Unlike the network of disposal facilities available to take low volume VLLW, there are considerably fewer facilities across the UK that currently take LLW, a fact reflected in findings of the Atkins data collection project of the relative transportation of LLW for incineration compared to landfill. Nonetheless, operators of existing and new facilities may wish to apply to take LLW at any time, from either the nuclear or non-nuclear industries.”

And finally, on contaminated land, para 6.36 notes:

“Whilst they are potentially significant in terms of volumes, the ad hoc nature of arisings from remediation of land contaminated with radioactivity does not allow for long term planning for disposal of associated soils etc. This non-nuclear strategy does not therefore include any requirements on planning authorities to make specific provision within their planning frameworks. There does not seem to be any reasonable alternative to the present position, which is that each case should be dealt with by the affected local authorities and the environment agencies as it arises. However, it would be prudent for waste planning authorities to make reference in their planning documents to the possibility that contaminated land might arise in their area, and that some disposals of contaminated soil might be required within local landfills.”

It might be helpful if the strategy made a clearer distinction between the expectations of Government for (a) preparation of local development frameworks covering waste and (b) development control. For the preparation of local development frameworks, it would be helpful to more clearly distinguish between the Government's expectations for the way low volume VLLW, high volume VLLW and LLW should be addressed. In particular, as the disposal of low volume VLLW is routinely disposed of with conventional waste to landfill, should Government clarify that this does not need to be explicitly and separately addressed in local development frameworks? For the disposal of high volume VLLW and LLW, which requires permitting under radioactive waste regulations, should Government state whether it expects all WPAs to identify suitable facilities in their local development frameworks where disposal does or could in principle take place, or whether it is sufficient to note that disposal requirements may arise from time-to-time, which will be considered on a case-by-case basis against local waste planning policies?

For development control, the Government's acknowledgement that it is possible to impose a condition which broadly specifies what type of waste can be taken to a particular site should be welcomed. The strategy should also recognise that conditions might be used to restrict the geographic sources of wastes, thereby giving expression to key planning

objectives in PPS10. Our understanding on the use of conditions to limit the source or types of wastes is that: any condition has to have a planning purpose otherwise it may be liable to successful challenge (see the tests in Govt circular 11/95); an authority will be on stronger ground if a development plan policy sets out reasons for limiting the source or types of wastes; such reasons will apply more to geographic sources rather than types of wastes (for example to promote net county self sufficiency and communities taking more responsibility for wastes generated in their area); and there are numerous examples of conditions and S106 agreements that provide various limits to the amount of (non-radioactive) wastes to be taken from outside an administrative or defined area. These include “no wastes”, “only where capacity remains that is not required to meet the needs of the county”, and “no more than 25% of the wastes”.

7 Role of the NDA

Para 2.46 states that: “the UK Nuclear Industry LLW Strategy sets out how the nuclear industry, with supply chain support, can ensure continued capability and capacity through applying flexibility in the determination of treatment and disposal routes and giving proper consideration to all viable options. These options include in-situ disposal; development of new facilities on or adjacent to sites for management of waste from those sites; or extended facilities to manage wastes from a number of sites; or the development of new facilities away from nuclear sites.

Para 2.47 adds that: “The demand from the nuclear sector for waste disposal facilities is expected to stimulate new opportunities for waste management operators. The potential widening of the commercial treatment and disposal network is expected to also benefit the non-nuclear industry.”

As pointed out in NuLeAF Briefing Paper 19 on the Nuclear Industry LLW Strategy, that strategy’s statement that it does not wish to prescribe whether disposal options on, adjacent to, or away from existing nuclear sites are preferred is in effect undermined by the commitments to early solutions and affordability, and the emphasis on the use of existing waste management capacity (even if at a considerable distance from the source of waste). These perspectives strongly suggest a preference for the use of existing landfill sites, rather than the development of new facilities (particularly on or adjacent to existing nuclear sites). Where the new use of existing facilities (eg King’s Cliffe landfill) or the development of new facilities (eg Keekle Head landfill) have been proposed, opposition has been expressed by the relevant WPAs. As such, the extent to which the demand from the nuclear sector will actually result in the widening of the commercial disposal network to the benefit of the NNI is questionable.

Furthermore, any widening that does occur may not contribute substantially to the fulfilment of the Government’s desire for communities to take more responsibility for NNI high volume VLLW or higher activity LLW generated in their areas, because transport over considerable distances may still be required in order to utilise the newly available facilities.

It is arguable that the interests of the NNI, and steps towards implementation of the proximity principle, would be better served by Government and NDA giving greater encouragement to the development of LLW disposal facilities on or adjacent to existing nuclear sites.