

# Nuclear Free Local Authorities **RADIOACTIVE WASTE POLICY**

## Briefing No. 35 – Scottish ILW Storage Policy

Prepared for NFLA Scotland member authorities, September 2012

### Intermediate Level Waste Storage Solutions – Central and Southern Scotland Credible Options. Nuclear Decommissioning Authority (NDA) Consultation August 2012.

The Nuclear Decommissioning Authority has invited public comment on this paper by Friday October 5th 2012 by email to [strategy@nda.gov.uk](mailto:strategy@nda.gov.uk). This model response has been prepared by the NFLA Scotland Policy Advisor and is the basis of its submission to the NDA. Scottish NFLA members are encouraged to support and endorse this model response for their own local submission.

#### 1. INTRODUCTORY COMMENTS – ENVIRONMENTAL PRINCIPLES:

**1.1 The Nuclear Free Local Authorities Steering Committee agreed a set of clear environmental principles which should be used for the management of nuclear waste in October 2004 at its Annual General Meeting in Hull. These are:**

- \* the idea that radioactive waste can be "disposed" or be rejected in favour of radioactive waste management
- \* any process or activity that involves new or additional radioactive discharges into the environment be opposed, as this is potentially harmful to the human and natural environment
- \* the policy of 'dilute and disperse' as a form of radioactive waste management (i.e. discharges into the sea or atmosphere) be rejected in favour of a policy of 'concentrate and contain' (i.e. store safely on-site)
- \* the principle of waste minimisation be supported
- \* the unnecessary transport of radioactive and other hazardous wastes be opposed
- \* wastes should ideally be managed on-site where produced (or as near as possible to the site) in a facility that allows monitoring and retrieval of the wastes

1.2 NFLA believes that radioactive waste management policy should follow a clear set of environmental principles such as those set out above. This would mean that 'disposal' should not be included as a policy option because it breaches the environmental principles.

#### 2. Presentation of Data

2.1 It would have been helpful if the NDA Credible Options Paper had presented data about the waste being considered in a manner which is consistent with Table 1 in the Scottish Government's Supplementary Information 2010 document.<sup>1</sup>

2.2 The NDA document says "Table 1 shows the waste considered in developing the credible options", but nowhere does it make clear that this does NOT include all of the waste in this category.

2.3 Hunterston A, for example, is said to store 1179 x 3m<sup>3</sup> packages, whereas the Scottish Government document show that there is an estimated volume of waste arising (unpacked) at Hunterston A of 6,434 m<sup>3</sup>. It is not clear whether or not the difference

<sup>1</sup> Scotland's Higher Activity Radioactive Waste Policy Supplementary Information 2010  
<http://www.scotland.gov.uk/Resource/Doc/298942/0093255.pdf>  
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between these two numbers is accounted for by “final site clearance waste arisings” which will not arise until after 2080, so are not considered in this document.

- 2.4 The Credible Options Paper Table 1 talks about desiccant waste at Hunterston and Torness. This will be decontaminated and packaged for disposal as LLW. More information should have been provided on this. Removal of radioactive contamination from waste could breach the principle that we should concentrate and contain radioactivity rather than dilute and disperse it throughout the environment. It could also breach the ALARA principle.

### 3. Graphite Waste

- 3.1 We note that the Solid Active Waste Building at Hunterston A is the subject of a Nuclear Installations Inspectorate (NII) Improvement Notice which originally required the site operator to retrieve and make passively safe the waste stored in the building by the end of 2010. It is a matter of concern that the NII has seen fit to give Magnox North (Energy Solutions) a three year extension to this Improvement Notice to the end of 2013. This means that the company was able to delay dealing with what is clearly a serious problem with the waste in this building, mostly graphite fuel sleeves, while the Graphite Pathfinder Project feasibility study was carried out.<sup>2</sup> This Credible Options Paper would have been a useful opportunity for the NDA to report on progress with this waste and to clarify where it now stands on near surface disposal of this waste.
- 3.2 Up until the end of 2011 Energy Solutions had been looking at the feasibility of disposing of graphite reactor components in a near surface facility at, or near to, Hunterston A – the Graphite Pathfinder Project. However, the NDA has now asked Energy Solutions to stop work on this project for economic reasons.<sup>3</sup> SEPA’s advice published in June 2011 appeared to be fairly negative about the proposal as well.<sup>4</sup>
- 3.3 Figure 2 in the Scottish Supplementary Information document shows that almost half of the estimated volume of Higher Activity Waste arising in Scotland is graphite waste. The finalised Scottish Government Policy made clear that:

*“...long-term **storage is still the primary long-term management option**”<sup>5</sup> (emphasis added)*

But the Committee on Radioactive Waste Management has been keen to emphasise that 75% of Scotland’s Higher Activity Waste is suitable for near surface disposal.

- 3.4 Whilst NFLA welcomes the fact that the Credible Options paper does not bring forward any new proposals for near surface disposal of waste, it is important that the NDA clarifies its position on near surface disposal and updates Scottish Stakeholders on progress in dealing with the graphite sleeves at Hunterston which in 2010 was said to present an urgent waste management problem.

### 4. Credible Options

- 4.1 The NDA says it has made a commitment to look at the possibilities of consolidating intermediate level waste (ILW) at fewer locations. The current baseline strategy for EDF Energy and the Nuclear Decommissioning Authority (NDA) is that ILW is to be stored at the

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<sup>2</sup> Addressing CoRWM recommendation 8: NDA Reactor Decommissioning Waste Project and Hunterston feasibility work on near surface disposal of graphite fuel sleeves, NDA/WMSG/P72, Issue 1, NDA 18<sup>th</sup> February 2010

<sup>3</sup> Hunterston Site Stakeholder Group Minutes 8<sup>th</sup> December 2011  
<http://www.sitestakeholdergroups.org.uk/hunterston/upload/Hunterston-SSG-Meeting-Pack-December-2011.pdf>

<sup>4</sup> SEPA’s Advice to Magnox Ltd on its Hunterston A Graphite Pathfinder Project, May 2011  
[http://www.sepa.org.uk/radioactive\\_substances/decommissioning/hunterston\\_a.aspx](http://www.sepa.org.uk/radioactive_substances/decommissioning/hunterston_a.aspx)

<sup>5</sup> Scotland’s Higher Activity Radioactive Waste Policy 2011. (para 2.04.03)  
<http://www.scotland.gov.uk/Publications/2011/01/20114928/2>

site where it arises, although some ILW streams such as desiccant and certain metals have alternative waste routes available.

- 4.2 The NDA points out that the proximity principle and Scottish Government policy require that waste management facilities should be as near to the waste producing site as practical so that the need to transport waste over long distances is minimal – but the NDA says consolidation of waste is consistent with this policy. NFLA disagrees with this assessment. The use of the term ‘near-site’, as opposed to the phrase “*at the site of production*”, allows a little flexibility so that storage facilities can be built adjacent to a licensed nuclear site. But transporting waste from one site to another is likely to arouse large-scale opposition from people living along transport routes and even from people living near nuclear sites who are prepared to countenance the storage of waste produced on that site, but not waste imported from elsewhere. For instance, there appears to be a consensus around Hunterston from all shades of opinion on the nuclear issue that waste from off-site should not be imported. NFLA has consistently argued that ‘near existing sites’ should mean within very close proximity to the site where the waste was produced.
- 4.3 The NDA also says that the waste hierarchy also requires that materials should be reused or recycled as appropriate. NFLA do not agree with the application of the waste hierarchy in this way. The ALARA principle and the ‘concentrate and contain’ rather than ‘dilute and disperse’ principle should take precedence over the recycling of contaminated materials and treatments of materials which result in further unnecessary discharges of radioactivity into the environment.

## **5. Hunterston Store**

- 5.1 Hunterston A already has an ILW waste store, which can store waste on-site, above ground, in a monitorable and retrievable condition. The Hunterston A store capacity exceeds the total anticipated space requirement for Hunterston A operational ILW by approximately 50%; this is sufficient, in principle, to accommodate all of the other ILW requiring storage in central and southern Scotland. This fact has created some concern locally.
- 5.2 However, it seems that Chapelcross already has a store in the detailed planning stage with construction scheduled to start in late 2012. The credible options evaluation considered that the possible transfer of Chapelcross wastes to Hunterston was not a credible option, because the waste packages could not be accepted by the Hunterston store without expensive alterations, and changes to the waste processing strategy to ensure the package is acceptable by the Hunterston store may result in an increase to the gaseous discharges. Moreover, the implementation of the Chapelcross baseline strategy is well advanced. Therefore, this is not a credible option.
- 5.3 The NDA has also decided that no further work will be done on options for transporting Torness waste elsewhere in the near future as the waste is not planned to be packaged for some time and there is sufficient capacity for the relatively small volume of this waste in stores at Torness.
- 5.4 Consolidation of Hunterston B ILW sludge and resins at the Hunterston A ILW store which will be packaged in the period 2018 to 2021. Use of the Hunterston A ILW store for this Hunterston B waste would remove the need for a Hunterston B ILW store. The NDA says transporting Hunterston B waste to Hunterston A would not require waste transport on public roads and would not delay the decommissioning programme at either site. To the NFLA this appears to be an acceptable application of the proximity principle.

## **6. Rosyth**

- 6.1 The Rosyth site also has an ILW store which is able to accommodate existing MoD-owned waste at Rosyth. NDA says the radionuclide fingerprint of these wastes is such that they will decay over a few years to low level waste, and they can then be disposed of at the

national Low Level Waste Repository in Cumbria. From 2015 this store may be cleared of MoD wastes and could potentially be available for other relevant purposes.

- 6.2 The NDA says it is theoretically possible that Torness sludge and resin might be to make use of the existing ILW storage facility at Rosyth, depending on the willingness of Babcock, the facility owner, to make it available for that purpose in the required timescale.
- 6.3 It should be noted that a recent consultation on submarine decommissioning carried out by Fife Council with residents in Rosyth, North Queensferry, Limekilns and Charlestown found that over two-thirds (67%) of residents are against nuclear waste storage at Rosyth. Opinion is likely to be even more strongly opposed to waste being imported from outside of Fife compared with opinion on storage of waste from submarines which have a history of providing some employment in Fife. NFLA would recommend dropping consideration of this idea altogether rather than waiting until 2015 to consider it further.

## **7. Conclusions**

- 7.1 At this stage the NDA's Credible Options Paper is merely suggesting moving some waste from one part of the Hunterston site to another, which appears perfectly consistent with environmental principles.
- 7.2 However the paper is clearly not written in a way which is accessible even to informed stakeholders and members of the public. This could have been used as a valuable opportunity by the NDA to explain its thinking on the next steps to be taken on graphite waste at Hunterston following the cancellation of the Graphite Pathfinder Project, and to explain its thinking on near surface disposal of ILW.
- 7.3 The NFLA has taken this opportunity to re-iterate its support for the use of a set of environmental principles when making decision about nuclear waste management. In particular these principles argue against so-called 'disposal' of waste whether near-surface or deep. They also argue against the current way in which the waste hierarchy is used because this leads to the dilution and dispersal of radioactivity rather than its concentration and containment.
- 7.4 The NDA should drop altogether, rather than postpone, consideration of the storage of Torness waste at Rosyth, and consideration of transporting Torness waste to the Hunterston store.