

Nuclear Free Local Authorities **RADIOACTIVE WASTE POLICY**

Briefing No.46 – NDA options for FED / ILW in England

Prepared for NFLA member authorities, February 2014

NFLA response to Nuclear Decommissioning Authority credible options for FED and ILW in England and Wales

i. Overview of Policy Briefing

In summer 2013 the NFLA responded to the initial consultation by the Nuclear Decommissioning Authority (NDA) considering options to optimise the number and location of fuel element debris (FED) treatment facilities and sites for interim storage of intermediate level waste. The NFLA's response to this initial consultation can be found at NFLA Radioactive Waste Policy Briefing 40 (http://www.nuclearpolicy.info/NFLA_RWB_40_NDA_FED_ILW_consultations.pdf).

The NDA considered responses to this initial consultation and published an updated 'credible options' consultation at the end of 2013. The NFLA Secretariat noted with disappointment that the NDA had not met the concerns raised by the NFLA. An updated submission was therefore developed and approved by the NFLA Steering Committee meeting of the 31st January.

The NFLA submission to the NDA is attached below.

Official submission of UK & Ireland Nuclear Free Local Authorities to the following NDA proposed options consultations:

- 1. Optimising the number and location of FED Treatment (Dissolution) Facilities in Magnox Limited, Credible Options, Nuclear Decommissioning Authority.**
- 2. Optimising the number and location of interim Intermediate Level Waste (ILW) storage facilities on Magnox Limited and EDF Energy sites in England and Wales, Credible Options, Nuclear Decommissioning Authority.**

I attach the response of the Nuclear Free Local Authorities (NFLA) to the Nuclear Decommissioning Authority (NDA) containing its view on the proposals being put forward. NFLA responded in detail to the initial consultations in June 2013, and this response reiterates the main points of that submission and adds in some new points.

NFLA is a local authority group made up of around 50 Councils from England, Scotland, Wales, Northern Ireland and the Republic of Ireland. It raises legitimate concerns over all aspects of nuclear policy in order to assist local government in meeting its commitment to sustainable development, environmental protection and public safety. Further details on its remit can be found at its website <http://www.nuclearpolicy.info> or by contacting the NFLA Secretariat using the details at the top of this letter.

Due to the overlapping nature of these NDA strategy papers the NFLA response covers them together in their totality and it is attached below.

1. INTRODUCTORY COMMENTS – ENVIRONMENTAL PRINCIPLES:

- 1.1 The Nuclear Free Local Authorities (NFLA) Steering Committee agreed a set of clear environmental principles which should be used for the management of nuclear waste. These were agreed in October 2004 at its Annual General Meeting in Hull. They 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 the NDA's radioactive waste management policy across the UK 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 by the NDA in these consultations because it breaches the environmental principles.

1.3 As noted by the NFLA in its June 2013 response, the NDA's proposals for optimising the number and location of ILW sites and FED dissolution facilities is described as being consistent with the NDA's Integrated Waste Management (IWM) Strategy, which states that centralised and multi-site approaches should be considered where it may be advantageous. NFLA fundamentally disagrees with this approach. It rather urges the NDA to focus on its original objective of cleaning up the UK nuclear legacy in "*ways which protect the environment for the benefit of current and future generations*". (1)

2. Fuel Element Debris

2.1 NFLA notes that many of the old Magnox reactor sites are home to stores of Fuel Element Debris (FED), which consists of the splitters or lugs - essentially "fins" that optimised in-reactor fuel element cooling during generation - removed from Magnox fuel elements before the spent fuel is sent to Sellafield for reprocessing. These splitters or lugs, like the fuel casing itself, are made of a magnesium alloy. Magnesium is inherently a reactive metal.

2.2 NFLA notes that, at Berkeley, Hunterston A and Trawsfynydd, FED is packaged for long-term storage and disposal, and the construction of interim waste storage facilities has made progress. The Intermediate Level Waste Store at Hunterston A in Scotland has widespread community support as long as its use is restricted to waste arising on the Hunterston A or Hunterston B sites. Its use in this way is also consistent with the environmental principles supported by the NFLA (see box above) which it encourages the NDA to progress.

2.3 At Dungeness A station a "Magnox Dissolution Plant" was built in the later 1980s. (2) This has treated FED with acid, reducing the solid waste volume by a factor of about 20 but discharging about 15% of the radioactivity into the environment. Given that this waste management technique relies on the dilution and dispersal method which inevitably leads to increases in radioactive discharges into the marine environment, NFLA continue to believe it is not consistent with the UK Government's commitments to the OSPAR international treaty to reduce such discharges to 'near to zero'. The OSPAR Treaty requires the UK Government to ensure discharges of radioactive substances "*are reduced to levels where concentrations in the marine environment above historic levels ... are close to zero*" by 2020.

2.4 In the NFLA's view, building further dissolution plants after the OSPAR Treaty was signed in 1998 cannot be considered to be consistent with the UK's obligations. Yet the NFLA notes with dismay that Costain was awarded a contract to build a plant at Bradwell in September 2010. (3) Construction of this plant is expected to be completed in July 2013 – later than originally planned. (4) FED was not generated at Wylfa because desplitting of

spent fuel elements was not undertaken at the site. (5) That leaves Sizewell A, Oldbury and Hinkley Point A where a decision still has to be made about what to do with FED.

- 2.5 In the updated strategy paper, the NDA says treatment by dissolution has already been identified as the preferred approach “within site-specific Best Practicable Environment Option (BPEO) studies”. The reduction in solid waste volumes has the knock-on effect of reducing the size of store required for interim storage of ILW though it does lead to some discharges of radioactive and non-radioactive by-products to the environment. A BPEO study which countenances the use of the marine environment as a dumping ground for toxic substances in contravention of an international treaty, simply because it reduces the size of stores required is clearly using a very peculiar weighting system. Concentrating and containing waste rather than diluting and dispersing it is a primary principle of environmental protection and the NFLA believe it is remiss of the NDA to diverge from this principle.
- 2.6 Aside from the fact that transporting FED waste between sites clearly runs counter to the proximity principle which deems that hazardous waste should not be unnecessarily transported, the NDA proposal to reduce the number of facilities it needs to build by transporting FED waste between sites clearly has no community support. As has previously been shown at Hunterston the idea of bringing waste from outside to a reactor site has virtually no support even amongst those who are generally supportive of the nuclear industry locally. The NFLA also notes continued concerns raised by Maldon District Council in Essex and Councils in Somerset to the NDA proposals.
- 2.7 In the NFLA’s view, the NDA should drop plans to build new dissolution plants at Hinkley Point A and elsewhere, cancel plans to open a dissolution plant already under construction at Bradwell, and store the FED waste on the sites where it has been generated in purpose built stores similar to the one constructed at Hunterston in Scotland.

3. ILW Interim Storage Facilities

- 3.1 The aim of the second updated NDA strategy paper is “*to establish which sites are the most appropriate locations for interim storage of Intermediate Level Waste across Magnox and EDF Energy Sites within England and Wales.*” In the NFLA’s view, the application of the proximity principle should require waste to be stored at, or very close to, the site where the waste was generated.
- 3.2 The updated options paper now looks at both Magnox stations and EDF operating stations. Most of the options proposed in the updated paper by the NDA involve moving waste, for example from Oldbury to Berkeley, Dungeness to Hinkley and Dungeness and/or Sizewell to Bradwell. In the NFLA view, these options should be dropped.
- 3.3 As in the case of Scotland where the final preferred option involves moving waste from Hunterston B to Hunterston A, the NFLA considers such short movements to be an acceptable way of optimising the number of ILW storage facilities whilst continuing to stay within the environmental principles. (6) This could therefore be possible with ILW on Sizewell A and Sizewell B and with Hinkley Point A and Hinkley Point B for example. The NFLA stated this clearly in its response to the NDA strategy paper of 2012 that considered Scottish sites, which should be reconsidered by the NDA when reading this particular NFLA submission (7). NFLA also agrees with West Somerset Council and Maldon District Council view that proposals to transport nuclear waste ignore public health and safety. (8) (9)

4. Transportation concerns

- 4.1 The NFLA notes that the NDA has listened to feedback to move many proposed road transports to rail, wherever possible. Though that may be a welcome response to feedback, NFLA remain concerned over the possibility of an accident involving such rail transports as they would with road transports.

- 4.2 The NFLA notes two recent incidents involving an accident with trains that normally transport radioactive waste. One involved a September 2013 derailment of a train containing empty flasks close to Barrow, which led to the closure of the mainline for a number of days. (10) The second involved a January 2014 crash between a train and a car by a level crossing close to Lancaster. Again, fortunately the train was not transporting nuclear fuel. (11) Both incidents involved a response from the emergency services and inquiries are ongoing into the issues raised by these emergencies.
- 4.3 These two incidents are instructive to the NFLA that accidents involving radioactive waste transports remain eminently possible and why such movements should be reduced to the bare minimum. NFLA also notes that, despite an increase in rail transport, there will still remain substantial levels of road transport by lorries, even if it may be over shorter distances.

5. Conclusions

- 4.1 In the NFLA's view, the proposals in these two updated NDA strategy papers continue to breach several important environmental principles by a failing to concentrate and contain waste and a failure to implement the proximity principle.
- 4.2 As suggested previously by West Somerset Council and reiterated by the Nuclear Legacy Advisory Forum (NuLeAF) in its submission, the NDA should ensure that local councils and other stakeholders are involved in all discussion and consultations, at all stages, on the development of a new strategy for the intermediate storage and treatment of fuel-element debris at Magnox sites and interim storage of Intermediate level waste. (9) The NFLA would be happy to be involved in such discussions.
- 4.3 In short the NDA should not go ahead with this process using the strategy it has proposed and rather consider ways to develop a new strategy using a much more open and transparent process. Relying on Site Stakeholder Groups rather than being in contact directly with Local Authorities is also a part of this strategy process that needs to be reconsidered.

6. References

- (1) Managing the Nuclear Legacy White Paper, DTI, July 2002
http://www.nda.gov.uk/documents/upload/white_paper_managing_the_nuclear_legacy_a_strategy_for_action.pdf
- (2) See <http://www.no2nuclearpower.org.uk/articles/MagnoxDissolution020.pdf>
- (3) Construction Enquirer 29th September 2010
<http://www.constructionenquirer.com/2010/09/29/costain-wins-75m-nuclear-clean-up-job/>
- (4) <http://www.nda.gov.uk/sites/bradwell/index.cfm?renderforprint=1>
- (5) See
<http://www.magnoxsites.com/UserFiles/File/publications/environmental%20reports/WylfaSEABaselineV1formatted.pdf>
- (6) Intermediate Level Waste Storage Solutions, Central and Southern Scotland Preferred Option, NDA April 2013 <http://www.nda.gov.uk/documents/upload/Intermediate-Level-Waste-Storage-Solutions-Central-and-Southern-Scotland-Preferred-Option-April-2013.pdf>
- (7) Nuclear Free Local Authorities Radioactive Waste Briefing 35, August 2012
http://www.nuclearpolicy.info/docs/radwaste/NFLA_RWB_35_Scottish_ILW.pdf
- (8) Burnham-on-sea.com 6th June 2013 <http://www.burnham-on-sea.com/news/2013/nuclear-waste-06-06-13.php>
- (9) Western Daily Press 6th June 2013 <http://www.thisissomerset.co.uk/Concern-plans-store-nuclear-waste-Hinkley-Point/story-19206109-detail/story.html>

- (10) North West Evening Mail, 16th September 2013
<http://www.nwemail.co.uk/news/nuclear-train-derails-between-barrow-and-roose-1.1084678>
- (11) BBC 15th Jan 2014 <http://www.bbc.co.uk/news/uk-england-25742406>