

Nuclear Free Local Authorities **RADIOACTIVE WASTE POLICY**

Briefing No.66 – Final stages of decommissioning

Prepared for NFLA member authorities, December 2016

UK Government discussion paper on the Regulation of Nuclear Sites in the Final Stages of Decommissioning and Clean-up

i. Preamble

This edition of the NFLA Radioactive Waste Policy Briefing gives its model response to a UK Government discussion paper on the regulation of nuclear sites in the final stages of decommissioning and clean-up. It has been commissioned by the NFLA Steering Committee and NFLA Scotland Forum as it will have an impact on all existing nuclear sites, and some non-nuclear sites, in England, Scotland and Wales. It has been developed by the NFLA Scotland Policy Advisor. The NFLA Secretary has been to two early workshops on this matter in Warrington, and a third is taking place in Manchester on the 28th November. This model response will provide useful background for that meeting. NFLA member authorities are encouraged to use the NFLA response if they wish to directly respond to the discussion paper.

1. Introduction

The UK Government Department for Business, Energy and Industrial Strategy (BEIS) has published a discussion paper on the regulation of nuclear sites in the final stages of decommissioning and clean-up. The document makes proposals which would result in the final stages of decommissioning and clean-up being regulated under the existing environmental and health and safety legislation that applies to radioactive and non-radioactive substances at all non-nuclear sites – in other words by the Environment Agencies rather than the Office for Nuclear Regulation. The proposals would also enable the “*optimisation of both site end states and waste management*” which could mean leaving some radioactive contamination in situ rather than transporting it to an off-site disposal facility if this was shown to be the optimal solution.

The discussion paper is available here:

<https://www.gov.uk/government/publications/discussion-paper-on-the-regulation-of-nuclear-sites-in-the-final-stages-of-decommissioning-and-clean-up>

Responses should be submitted by **29 December 2016** to:
Nuclear Decommissioning and Radioactive Waste Policy Team
Civil Nuclear and Resilience Directorate
Department for Business, Energy and Industrial Strategy
Floor Area 2E, 3 Whitehall Place,
London, SW1A 2AW

Email: PRC.discussionpaper@beis.gov.uk

2. Background

In May 2016, the Nuclear Free Local Authorities (NFLA) responded to a consultation on the Environment Agencies Guidance on ‘Requirements for Release of Nuclear Sites from Radioactive Substances Regulation’

This response raised three main concerns with what was being proposed.

Firstly the way of assessing the radiological hazard of a site which has been released from radioactive substances regulation appears to be too flexible.

Secondly, it was not clear who is expected to regulate a site which is being made available for restricted use. Local authorities are unlikely to have the resources to regulate such a site.

Thirdly, the proposals appear to allow for the unrestricted use of sites which may have nuclear waste buried and which could be capable of administering doses of up to 20mSv/yr if human intrusion occurs. It is the NFLA view that such sites should remain subject to radioactive substances regulation.

The NFLA Response to the GRR consultation is available as NFLA Radioactive Waste Policy Briefing from this link:

http://www.nuclearpolicy.info/wp/wp-content/uploads/2016/05/Rad_Waste_Brfg_63_Delicensing_nuclear_reactors.pdf

3. The role of local authorities

On the second concern above, NFLA was pleased to learn from the latest discussion document that: *“None of the proposals would involve the relevant environment agency passing on any of their regulatory remit for environmental protection and improvement to the local authority.”*

NFLA are generally in favour of managing waste on the site where it is produced, and generally opposed to the unnecessary transport of radioactive waste. However, NFLA favours the management of waste in facilities which allow monitoring and retrieval of the wastes. NFLA also favours concentration and containment of radioactive waste and opposes its dilution and dispersal. NFLA also supports the “polluter pays” principle.

4. Public Acceptability

The document points out that the successful implementation of these proposals will require good communication, with members of the public, and especially the local community and that stakeholder engagement and support will be fundamental.

But the proposals will not succeed, even with exemplary community engagement, if it is set against the current context of Nuclear Decommissioning Authority (NDA) waste management strategies which use the so-called waste hierarchy to justify spreading waste around the country rather than concentrating and containing it on the site where it is produced. Transporting waste between sites, sending waste to incinerators and landfill sites, or for “processing” and treatment all result in unnecessary discharges of radioactive substances into the environment.

Set against this backdrop the proposals in this discussion paper will be seen as dumping contaminated soil and rubble on old nuclear sites as an easy option designed to save money rather than moving it to a dedicated disposal facility.

Dr Paul Dorfman of the University College London, and a former member of the secretariat for the UK Government’s independent Committee Examining Radiation Risks of Internal Emitters said: *“It’s another example of how much of the stuff we have and we don’t really know what we’re going to do with it, we’re just leaving it [the LLW]. It’s an appalling choice”*.¹

As the Discussion Paper points out:

“It is possible that local communities may be concerned that this would mean the site being left in an unacceptable or hazardous state. This would not be the case. The UK Government would not

¹ Guardian 10th Nov 2016 <https://www.theguardian.com/environment/2016/nov/10/nuclear-waste-to-remain-at-old-uk-plants-rather-than-moved-off-site>

proceed with the changes discussed here if they were not consistent with the radiological protection standards for members of the public established by Public Health England, which are aligned with international standards.”

These few sentences raise several points which require examination:

- If what the Government is proposing is going to succeed it will require a level of trust between the local community and the NDA.
- Whether leaving the site in the condition proposed is acceptable or not is surely up to the local community – it is not for BEIS to declare “This is not the case”.
- What is proposed may well be consistent with international radiological protection standards, but are these standards acceptable to the local community?
- The idea that proposals would be “*consistent with the radiological protection standards*” makes no allowance for the uncertainties involved. Environmental models may suggest that the risk from buried waste meets a certain risk guidance level, but there will always be uncertainty attached to these models.

5. NFLA Responses to BEIS Questions

Q1. Do you agree that the UK Government proposals set out in this paper should enable a more flexible approach to nuclear site clean-up that takes account of a range of possible site end states and opportunities to optimise waste management? If not, why not?

Whilst a policy of not necessarily returning a nuclear site to a green field state clearly allows the flexibility to implement a nuclear waste management programme based on monitorable, retrievable storage of waste at the site of production, and avoids the need to transport waste around the country, it could also mean quietly giving up on the idea of ever fully cleaning up the nuclear legacy, and different standards of decontamination depending on the intended future use of the site – with lower standards for sites likely to be developed for commercial or industrial use for example.

Waste left on a nuclear site should be contained in a monitorable, retrievable store. This would not preclude decontaminating the remainder of the site to a level which would allow unrestricted use.

Q2. Is flexibility necessarily a good thing?

NFLA agrees with the idea of making changes to legislation which would allow monitorable, retrievable storage of waste on nuclear sites. It makes sense for the environment agencies to be the regulator responsible. However, the phrase “more flexible approach” requires closer examination.

The HSE Criterion for De-Licensing Nuclear Sites (2005) says the Basic Safety Standards Directive (Euratom 96/29) allows member states to exempt a practice where appropriate and without further consideration if doses to members of the public are of the order of 0.01mSv or less per year. HSE is of the view that this dose limit broadly equates to a risk of 10^{-6} ‘as well as being consistent with other legislation and international advice relating to the radiological protection of the public. (1)

The environment agencies Guidance on Requirements for Authorisation (GRA) on Near Surface Disposal Facilities for Solid Radioactive Waste (Near Surface GRA) says that a risk level of 10^{-6} per year is equivalent to a calculated dose of around 0.02mSv/yr, where the probability of receiving the dose is one.

For situations where the probability of receiving a dose is less than one, doses could be greater. (2) NFLA believes this level of flexibility is unacceptable. It leaves too much open to interpretation, and will rely too much on environmental models which are uncertain. A fixed dose limit should instead be imposed.

Q3. What should the UK Government be mindful of when developing proposals to implement the changes discussed in this paper?

There is a legacy of public mistrust in the nuclear industry that still needs to be overcome before these proposals can be successfully implemented. Local communities affected by any proposals require access to independent experts who can help to verify that a nuclear site operator's proposals or what the environment agencies are proposing to approve will not cause levels of contamination or radiation doses which the community considers to be unacceptable.

For instance the discussion document says: "*Optimisation requires both the site operator and the regulator to make value judgements*" with no mention of input from the local community.

A sustainable decommissioning policy must be based on a clear set of environmental principles, in particular: the polluter pays principle, the concentration and containment principle and the proximity principle. Concerns about rising volumes of lower activity wastes should not be used to distract from the need to implement the Best Practicable Environmental Option (BPEO).

The concept of Best Practicable Environmental Option (BPEO) was first outlined in the Fifth Report of the Royal Commission on Environmental Pollution (RCEP) in 1976. The concept was elaborated in their Twelfth Report, "*The Best Practicable Environmental Option*" (1988) which defined it as "*the outcome of a systematic consultative and decision making procedure which emphasises the protection and conservation of the environment across land, air and water. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits or the least damage to the environment, as a whole, at acceptable cost, in the long term as well as the short term.*"

The crucial phrase here is "systematic consultative ... procedure" which the discussion paper's discussion of "optimisation" avoids mentioning completely.

Guidance on how the BPEO should be identified needs to be developed after wide consultation with local and national stakeholders. Decontamination of nuclear licensed sites to a level, which would allow unrestricted use, (apart from the area used for monitorable and retrievable waste stores) irrespective of the intended use of the site in the short-term, should be considered to be the ideal site end point. Leaving sites only partially decontaminated will result in the dilution and dispersal of radioactivity into the environment and might well cause problems in the future and increase overall lifecycle costs. Setting tough standards for decontamination will drive innovation and waste minimisation.

Q4. Do you agree that legislative changes are likely to be needed to realise the opportunity set out in this paper? If not, what more could be done under the existing regulatory regime?

NFLA agree that it makes sense for the environment agencies to be the regulator responsible for regulating monitorable retrievable stores on former nuclear sites. However the framework for third party nuclear liability needs to be clarified. Whilst there are still nuclear materials on a site, even if at very low levels of contamination the former nuclear operators must remain responsible under the polluter pays principle. Insurance premiums will of course fall to reflect the reduced level of risk, however provision needs to be made for uncertainties and the possibility that something unexpected may occur (e.g. as witnessed at Dalgety Bay).

Former nuclear operators should also be required to fund the environment agencies' future regulatory efforts.

6. Overall Conclusions of the NFLA to BEIS discussion paper

- There is a danger that what is being proposed will simply be seen as turning nuclear sites into nuclear dumps as a way of saving money.
- The concept of "optimisation" which is decided by the operator and regulators making value judgements needs to be replaced with the concept of the Best Practicable Environmental Option which uses *a systematic consultative and decision making procedure*.

- Any part of a nuclear site upon which it is proposed to allow unrestricted use must be able to show that doses to members of the public will be of the order of 0.01mSv or less per year. Using a risk factor in conjunction with probability of receiving a dose is too flexible and unacceptable.
- Any waste left on-site must be concentrated and contained in a monitorable, retrievable store.
- Former nuclear operators should remain liable for any future unexpected events and should also be liable to pay for any regulatory effort in perpetuity.

7. References

- (1) HSE Criterion for De-Licensing Nuclear Sites, May 2005 <http://www.onr.org.uk/delicensing.pdf>
- (2) Near-surface Disposal Facilities on Land for Solid Radioactive Wastes Guidance on Requirements for Authorisation, Environment Agencies, February 2009
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296507/geho0209bpjl-e-e.pdf