



The management of higher-level radioactive waste on nuclear licensed sites

Comments received during stakeholder engagement
March–May 2007 and the regulators' response

Guidance from the Health and Safety Executive,
the Environment Agency and the
Scottish Environment Protection Agency to nuclear
licensees

December 2007

Summary

Future extension of the scope of this guidance

Comments on the possible extension of the scope of the guidance were mixed, ranging from extending it to include all waste and material that may become waste to restricting the scope to 'traditional' intermediate-level waste projects.

It would be impossible to reconcile such a range of comments entirely.

Of particular note were comments that the current guidance was not yet well understood or applied and so extension at present would be premature. While we are disappointed by these comments we have taken them into account.

We feel it is important to at least keep in parallel with the government's Managing Radioactive Waste Safely (MRWS) work. The guidance will therefore be written with the same scope as the advice given by the Committee on Radioactive Waste Management (CoRWM) on which the government's work is based. These are termed the higher-activity wastes:*

- high-level waste (HLW);
- intermediate-level waste (ILW);
- low-level waste (LLW) (unsuitable for the UK LLW disposal facility).

At this stage, however, we will not attempt to cover material that may become waste, ie spent fuel, uranium or plutonium.

We note comments on the need for clarity in the scope and we will try to be as clear as possible in this respect.

Noting the comments on the level of application of the current guidance, we will pay particular attention to how we introduce the guidance to both licensees and regulators. We hope to achieve better understanding and application to build a firmer base for future development.

On extending the scope to be joint guidance with transport and security regulators, we recognise that there would be merits in such an approach. However, we are still learning in terms of producing joint guidance between two sets of regulators, and for now we prefer to stay with our current approach rather than expanding the document and delaying it by working out the relevant protocols. We will provide extensive 'signposting' to the other regulators' guidance and consider this for the future.

We will keep the options open for further extension of the scope in the future.

Application of the regulatory categorisation system

Again, comments on this topic were wide-ranging, from enthusiastic support to 'it will never work' and 'there is no need for such a system'. Many of the negative comments appear to be based on a misunderstanding of what the regulators are trying to achieve. This is not another categorisation system to describe the waste such as the LLW/ILW/HLW system – it is about what is intended to be done with the waste, not specifically the waste itself. Also, we are not looking for overly bureaucratic systems that add layers of work to the existing system.

* Description of higher-activity wastes taken from Annex 3 of the July 2006 CoRWM recommendations.

We are concerned that if we try to go forward with guidance for licensees setting up categorisation systems then, based on the responses received, we may end up causing more work than the potential benefits would justify. We therefore intend to take a stepwise approach. The guidance will, for now, explain how the regulators wish to prioritise their own effort using the factors much as described in the draft guidance (but emphasising that we are not asking licensees to set up specific categorisation systems, but to develop their own way of working to fit in efficiently with the regulatory objectives). It will explain which proposals we will wish to see and explain to licensees the benefits of their making such projects known to the regulators as soon as possible. After the guidance has been in place for a year, the regulators will review its application with a view to refining this process.

Part II Technical guidance – issues to cover

Suggested issues to cover, in addition to those proposed, in Part II of the joint guidance were:

- interim safe storage: this will be covered as appropriate in a module on waste conditioning;
- fast-track variations in discharge authorisations: This is specifically a matter for the environment agencies and not appropriate for joint guidance;
- transport: this is regulated by the Department for Transport. The joint guidance will refer to transport requirements (with reference to DfT guidance) where appropriate, and we are not planning a specific module at this stage;
- site end point: this is more a matter for decommissioning than radioactive waste management. Appropriate references will be provided in the module on remediation of contaminated land;
- optioneering: agreed. Although separate guidance exists on best practicable environmental option (BPEO) and as low as reasonably practicable (ALARP), a module explaining how this all fits together would be useful;
- environmental conditions for storage: this will be included in a module on storage;
- stages of a project: this will be included in a module on safety cases.

The full list of proposed modules is:

- Safety cases for the management of radioactive waste:
 - Content and structure of safety cases.
 - Periodic review of safety cases.
 - Stages of a project.
- Conditioning proposal and disposability:
 - Role of the conditioning proposal in a safety case.
 - Guidance on issues to be addressed in a demonstration of 'disposability'.
- Radioactive waste management strategies:
 - Strategies.
 - Integrated waste strategy (IWS).
 - Optioneering.
 - Strategies, IWS and safety cases.
- Waste minimisation, characterisation and segregation:
 - Waste hierarchy.
 - Waste minimisation.
 - Characterisation and segregation.

- Control, accountancy and records:
 - Ownership of radioactive waste.
 - Relationship between owners and licensees.
 - Accounting for radioactive waste.
 - Operating records.
 - Storage records.
 - Records retention.

- Storage of radioactive waste:
 - Design.
 - Acceptance criteria.
 - Environmental conditions for storage.
 - Passive safety.
 - Storage capacity.
 - Maintenance.
 - Retrieval and inspection.

It was suggested that until each module is finished, links to existing relevant guidance should be made available. We will do this in an appendix to the introductory document.

Other comments

Terminology

In the original joint guidance, the regulators introduced the term 'conditioning proposal' to describe the case to be put to regulators, particularly with respect to the disposability of packages. It is clear from comments received that far from being helpful, this term has caused some confusion. To remedy this, the guidance will now only use standard international radioactive waste terminology with one exception. The radioactive waste safety case will be termed the radioactive waste management case. The reason for this change is to reflect that the case will involve more than operational safety. Although in international terms the word 'safety' is taken, by convention, to include environmental and other matters, we believe that the wider audience of this guidance may not appreciate this subtlety.

Liquid and aerial discharges

'It is not clear how this guidance would relate to regulation of and guidance on liquid and gaseous discharges'. This guidance is about the management of radioactive waste on the licensed site, not its disposal. Disposal, be it of solid waste or liquid and aerial discharges, is solely a regulatory matter for the environment agencies. We will amend the text to make this clear.

Top-level explanatory section for the public

Several comments suggested that a top-level description of the processes, responsibilities etc would be useful so that members of the public could see the background and context of the guidance. We will produce this as an introductory document to the guidance.

Moving too fast

Some commented that the original ILW guidance never appeared to be fully implemented within the industry and therefore to move too fast on further guidance may not be prudent. While we find this comment disappointing, we do not believe this is a reason not to move forward. We will, however, be paying particular attention to how we implement any new guidance.

Enforcement sanctions

There was a request that the guidance should indicate what enforcement sanctions would be used for failure to comply. Failure to 'comply' with the guidance is not an enforcement matter. As stated in the foreword to the guidance 'Licensees are not required to follow this guidance, and are free to take other action. But, if they do follow this guidance, they will normally be doing enough to comply with the law as interpreted by the regulators at the time of writing, and the regulators may refer to this guidance as illustrating good practice.' Enforcement, if appropriate, will be against the relevant legislation and the regulators already have published enforcement policies.

Dissemination of LoC information

It was asked whether Letter of Compliance (LoC) information could be disseminated, allowing operators to share information on what has been judged to be technically feasible. The information in the LoC belongs to the Nuclear Decommissioning Authority (NDA) and the relevant licensee and it is not for the regulator to determine what should be disseminated. However, we understand that arrangements are in place to publish a 'public' version of the assessments done for LoCs.

Retrospective conditioning proposals

A question was raised regarding whether the regulators would want to see retrospective waste conditioning proposals for existing plants/packages. In so far as the regulators expect any operating plant to have an extant safety case, the answer is yes. Where waste is being conditioned by a process started before the advent of conditioning proposals, or where such waste is being stored, the safety case must include a justification of the conditioning that was done. We would expect this to be brought up to date as soon as is reasonably practicable, and certainly at the periodic review of the safety case. The guidance will make this clearer.

Guidance available until the joint guidance is complete

It was felt unclear as to how operators should work to the joint guidance in the period before Part II is complete, noting that this may influence the order of publication of the Part II modules. We will publish along with Part I, a list of existing guidance (whether internal guidance to regulators or international standards) that should be referred to until Part II is completed.

Multi-site operations

Clarity was sought on multi-site transfer operations, including the interactions with safety cases on other sites and records transfer. Some text on this will be included.

Scope of conditioning proposals with respect to waste streams

'It is unclear what the scope of the conditioning proposal is and what it should cover. Clarification is required on whether a conditioning proposal is required for each 'facility' that the waste will pass through or whether it is valid for a multi-phase process, ie retrieval, conditioning and processing of waste. Clear definition of what constitutes a waste stream is required.'

We accept that clarification is required and further text will be provided.

Application in Scotland

The Scottish government stated on 25 June 2007 that it does not accept that geological disposal is the right way forward for Scotland. The policy for waste in Scotland is to support long-term 'near surface, near site' storage facilities so that the waste is monitorable and retrievable and the need for transporting it over long distances is minimal. In consequence of this the regulators considered the scope of the guidance in Scotland. The regulators take the view that packages conditioned in anticipation of deep geological disposal are also suitable for interim storage as set out in the Scottish policy. On this basis the guidance is equally applicable in

England, Scotland and Wales, noting that any references to disposal will mean interim storage when applied to Scotland. The regulators will keep under review the packaging advice being developed by the NDA's Radioactive Waste Management Division (RWMD) and if such developments mean that the above assertion is no longer valid, further guidance will be given.

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