

Packaging of Solid ILW from Berkeley Decommissioning Site

(Concluding response to Interim stage)

Summary of Assessment Report

Issue date of Assessment Report: 4 February 2008

Background

Magnox South (formerly British Nuclear Group) has sought Interim stage endorsement for the packaging of solid intermediate level wastes (ILW) currently stored in the Active Waste Vaults (AWV) at the former Berkeley Power Station or held in facilities at the adjacent Berkeley Centre (the two sites being known collectively as Berkeley Decommissioning Site).

This document summarises the results of the assessment carried out by NDA Radioactive Waste Management Directorate (RWMD) in response to the submitted proposals. The assessment has been carried out as part of the Letter of Compliance process, whereby RWMD examines the disposability of the proposed waste packages by assessment against ILW packaging standards and specifications and the Phased Geological Repository Concept (PGRC). Further information on the Letter of Compliance process is available elsewhere¹.

Packaging proposal

The Interim stage proposals recognise different categories of waste, as follows:

- Fuel Element Debris (FED);
- Miscellaneous Contaminated Items (MCI);
- Miscellaneous Activated Components (MAC).

The solid ILW would be retrieved directly from the AWV or exported from facilities at Berkeley Centre. The process would include sorting and assay to allow the positive identification of wastes and the diversion, where necessary, of some components as Wastes Requiring Additional Treatment. All containerised wastes would be opened by shredding, allowing any fine material (items capable of passing a 5mm screen, either originally present or produced by shredding) to be segregated for treatment as mobile waste.² The coarser component of containerised waste would be sorted, inspected and assayed, categorised and finally packaged.

All categories of solid ILW would be immobilised through grouting into 3m³ Boxes.

Assessment

This assessment is restricted in scope, limited to consideration of Action Points that were placed in previous Interim stage Assessment Reports. These Action Points have all been satisfactorily closed out.

¹ *Guide to the Nirex Letter of Compliance Process*, Nirex Document WPS/650, June 2006.

² Assessment of proposals for treatment and packaging of mobile wastes is being addressed separately.

Conclusions

The assessment has concluded that the information provided is complete and shown to be adequate to enable closure of the Action points raised for completion at the Interim stage.

The proposal has been judged against the regulatory prioritisation scheme and the view of RWMD is that it be considered as MEDIUM priority³. The principal reason for this judgement is that administrative controls will be used to prevent a criticality. Magnox South is advised to seek the necessary interaction with regulators to confirm this position.

With the close-out of the Interim stage Action Points, NDA RWMD has concluded that the proposed waste packages can be endorsed at the Interim stage and a Letter of Compliance will be issued. It is noted that an Assessment of Disposability has yet to be compiled for these wastes. NDA RWMD would expect such an assessment to be commissioned before the Final stage submission. Further Action Points will have to be addressed as part of any Final stage proposals for the waste.

³ *The Management of Radioactive Waste on Nuclear Licensed Sites – Part 1: The Regulatory Process*, Guidance from the Health and Safety Executive, the Environment Agency and the Scottish Environment Protection Agency to nuclear licensees, December 2007.