

Nuclear decommissioning and the waste hierarchy: where we are, challenges and issues

A one day SD: SPUR event

11 May 2011, Maple House, Birmingham



Supported by:



Background

The operation and decommissioning of the nuclear sites and the operation of non-nuclear sectors such as medicine, oil and gas facilities is forecast to produce significant quantities of very low level radioactive solid wastes in the future. The only facility in the UK for low level wastes, of any scale, is the Low Level Waste Repository in Cumbria. This is designed for higher level LLW, but has only limited capacity.

The UK has a LLW policy and developing strategies for very low level wastes that open a variety of possible solutions. The main approach is to avoid production of such wastes where possible and to apply the waste hierarchy (reduce, reuse, recycle etc). However, it is certain that significant quantities of solid, mainly soil and rubble, wastes will be produced for which disposal to near-surface facilities is the only credible option. Interim storage at the sites of generation may be a possibility in some cases but is not preferred by government policy.

Why you should attend

The purpose of the day is to identify the differing views of all relevant stakeholder groups in relation the management of LLW. The outputs will be the shared experience of taking part and a written report that summarises and thematically organises the opinions.

The aim is to discuss the management options for LLW in general terms, with no particular local or national proposal in mind. However, invited stakeholders may have particular local issues/ proposals and may wish to highlight the main learning points from these experiences to help others across the UK.

The day will be to discuss the particular options available for the management of LLW and the public acceptability of the risks associated with these options. Whatever future decisions are made, this waste exists already and management solutions need to be explored.

Who should attend?

The day will be of interest to:

- national authorities
- site licensee companies
- local authorities
- contractor and consultants
- representative groups
- local campaign groups
- non-governmental organisations (NGOs)
- regulators
- government and commercial waste solution providers.



Programme

Introduction and overview

- 10.00 Registration
- 10.30 Chairman's introduction
Tim Hedahl, former Head of National Low Level Waste Strategy, Low Level Waste Repository
- 10.45 Implementing the National Low Level Waste Strategy
David Rossiter, Head of National Strategy Implementation, Low Level Waste Repository
Dick will provide an overview of the work LLWR has been doing over the past three years to develop and implement the new National LLW Strategy for the UK. Dick will present how LLWR is implementing the strategy through: the construction of Vault 9, the new LLWR environmental safety case, and implementation of the waste management hierarchy.

Disposal

- 11.05 Feasibility for near surface disposal of reactor graphite wastes
Adam Meehan, Decommissioning Programmes Manager, EnergySolutions
Dr Meehan will outline the Hunterston A Site Graphite Pathfinder Project, which is developing novel methods for disposing of waste graphite on site. The current plan is that Hunterston A waste graphite will be stored along with other intermediate-level radioactive waste (ILW) in a specially constructed on-site store until a permanent deep geological disposal facility is completed in about 2040 at a location still to be identified.
- 11.25 Development of high volume very low level waste disposal route to Lillyhall Landfill Site
Andy Drom, General Manager, Waste Disposal & Technical Services, Waste Recycling Group
This presentation details the experiences developing a high volume very low level waste disposal facility at Lillyhall, Cumbria, including disposal route background, permitting considerations and an overview of the stakeholder engagement process.
- 11.45 Alternative routes for off-site disposal
Phil Holland, Decommissioning Development Manager, SITA UK
Phil will examine the need for alternative disposal options and identify the options available. The permitting situation will be explained with regard to SITA UK facilities and the Clifton Marsh alternative disposal option will be detailed in terms of history, RSA authorisations, waste types and a discussion of the main problems.
- 12.05 Refreshment break
- 12.20 Incineration isn't just combustion
Mike Beedham, Tradebe
Incineration is a reliable proven BAT technique used extensively in the traditional waste management sector and is increasingly being used for treatment of SoLA/VLLW/LLW/ILW and NORM. Mike will evaluate this emerging option in terms of its viability for dealing with radioactive waste and how any issues are overcome.

- 12.40 Harwell's journey towards alternative disposal solutions for lower activity wastes.
Paul Atyeo, Decommissioning Project Manager, RSRL and John Sharp, Harwell Local Stakeholder
There has never been a universally available and appropriate route for lower activity LLW in the UK and this presentation discusses the issues of alternative disposal solutions for such wastes from the perspective of the Harwell site. The main learning points from the debates exploring the relative merits of the potential disposal options will be discussed.

- 13.00 Q&A for disposal session

- 13.20 Lunch

Avoidance, recycling and reuse

- 14.20 Initial assessment of the use of recycled concrete aggregates as a component for waste encapsulation grouts
Paul Kelly, Technical Specialist, Sellafield and Ed Butcher, Technology Manager, Sellafield
The UK nuclear industry is performing waste management operations to treat materials arising from historical operations, with the current baseline technology being cementitious based grouts. Initial work is being performed to assess whether fine recycled concrete aggregates (FRCA) can be incorporated within grouts, to reduce the use of virgin materials.
- 14.40 Designing out and avoiding waste
David Adamson, Project Architect, Sellafield
Sellafield works at the forefront of waste minimisation and David will examine the approach to designing out waste through the application of Lean techniques and effective design tools. He will discuss effective implementation of site waste management plans and the waste hierarchy, backed by an analysis of the business benefits of avoidance.
- 15.00 A supplier perspective: recycling low activity metals by melting
Joe Robinson, Vice President Strategic Development, Studsvik UK Ltd
Joe's presentation will draw on Studsvik's history of recycling low level metallic wastes over the last 20 years from around Europe. He will discuss how metal melting enables metal from the nuclear industry to be safely recycled and the environmental benefits of recycling compared with disposal.
- 15.20 Diluting and dispersing very low level radioactive waste
Paul Dorfman, University of Warwick
SD:SPUR recommends "upstream" engagement to reach consensus on management solutions for exempt rad-wastes. However, problems persist, including: siting nuclear facilities, smelting emissions, difficulties in segregating high source terms and public perceptions. The relative safety of VLLW and the application of a conventional waste hierarchy is not agreed and remains open to critical analysis.
- 15.40 Q&A for avoidance, recycling and reuse session
- 15.55 Chairman's wrap-up
- 16.00 Close

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11 May 2011, Maple House, 150 Corporation Street, Birmingham, B4 6TB

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Company address _____

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Where did you hear about this event? _____

Company's main activity _____

Attendance includes refreshments, lunch and conference papers



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