

Alternative Solution for Higher Dose Wastes (Type IW Package)

Worldwide, many nuclear reactors, fuel fabrication facilities and reprocessing sites are moving from operations into decommissioning. Effectively dealing with this phase of the life cycle requires developing and adopting appropriate waste packaging solutions.

Internationally, waste producers have recognized that there is a potential benefit from having new optimized regulatory requirements for packaging certain waste items from decommissioning activities.

Why are we doing it?

- There is a proportion of the world's decommissioning waste that exceeds the unshielded dose rate limit of material allowed in Industrial packages (IP)
- It has therefore been recognized that there is a "gap" between the Type B packages and the Industrial Packages (IP)
- This forces operators to package waste in Type B packages, that require large amounts of substantiation for minimal benefits to safety with respect to the low hazard presented by such wastes
- This gap has significant implications on complexity, cost and duration of waste management programs across the globe

What are we doing?

- Operating a Task Force to develop a technical solution to the Higher Dose Waste problem by developing a new set of requirements to be included in the IAEA SSR-6 Transport Regulations
- Proposing the new requirements in the IAEA Technical Expert meetings and working to ensure that the proposals are given maximum exposure and progression
- Providing essential justification on the safety implications and benefits to support the argument for the new requirements



What are the benefits?



Design Benefits

- Simplifies packaging design process
- Reduces the number of packagings required for campaigns



Safety Benefits

- Reduces the exposure to operators
- Reduces handling and operations risks
- Reduces the number of shipments and therefore the risk of traffic accidents
- Reduces disposal facility footprint and construction risks



Environmental Benefits

- Reduces the environmental impact by reducing the amount of materials and energy used



Cost Benefit

- Reduces the overall cost and duration of decommissioning campaigns

What are the outputs?

- Revision of IAEA SSR-6 Transport Regulations to allow shipment of Higher Dose Wastes which will enable the realization of potential benefits
- Involvement in the development of a new package solution to satisfy new regulatory requirements

