

# Sellafield Ltd's experience with international waste management

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World-wide Perspectives on Waste Management Issues



# Sellafield - Key Priorities



**Environmental Remediation**



**Capenhurst**



**Waste and Effluent Disposition**



**SMP**



**Spent Fuel Management**



**Legacy Ponds & Silos**

**Nuclear Decommissioning Authority**



Owns the sites and competes contract – strategic direction



**Sellafield Ltd (SLC)**



Holds and is responsible for site licences – Sellafield and Capenhurst – tactical delivery

**Parent Body Organisation:  
Nuclear Management Partners Ltd**



which is a consortium comprising...



Holds SLC shares and provides reachback & management expertise and appropriate governance

**Regulatory bodies inc Nuclear Installations Inspectorate, Department of Transport, Environment Agency, Office for Civil Nuclear Security**

# Waste and Effluent Disposition Directorate

- The Directorate's vision is “to support the delivery of the site vision by delivering integrated and novel nuclear waste management dispositioning solutions to support the safe acceleration of high hazard risk reduction, while creating new work opportunities.”
- Vitrified Residue Returns (VRR) is the Programme that has delivered the capability and is now operating the return of HA waste back to the countries of origin.

# What are Vitrified Residue Returns (VRR)?

The 'Return' process involves:-

Solid HAW  
Canister



Residue Export Facility



Flask Marshalling Area



Shipping



Rail Transport

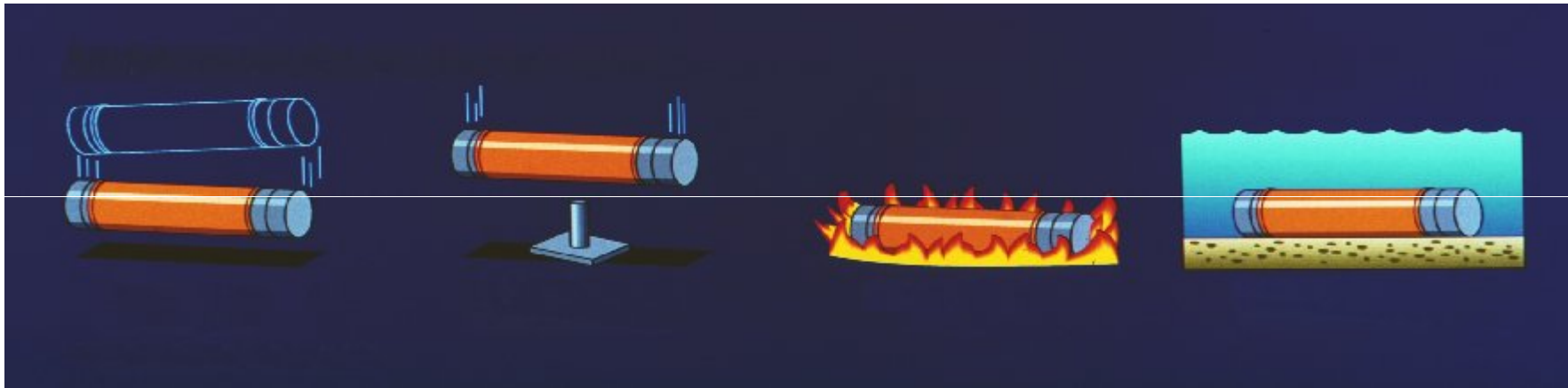
# Vitrified Residue Returns - 1<sup>st</sup> return ready to go



First flask leaving the REF facility at Sellafield

# HLW Transports

- HLW in a solid glass form is contained in stainless steel containers
- 20 or 28 containers are loaded in a type B package (typically around 120Te)
  - IAEA test requirements 9m drop, 1m drop onto punch
  - 800° c all engulfing fire
  - Immersion test



# Stakeholder Management

- Managing stakeholders in UK and overseas is a major workstream in the VRR programme
  - NDA's Customers (Interface managed through INS)
    - Japan, Holland, Switzerland, Germany & Italy
  - Regulators / Governments (examples for shipments to Japan)
    - UK – Department of Environment & Climate change, Nuclear Decommissioning Authority, Nuclear Installations Inspectorate, Environment Agency, Office Civil and Nuclear Security, Department for Transport, Japan – Ministry of Foreign Affairs, Foreign & Commonwealth Office.
    - Ministry Economy Transport & Industry, Ministry of Foreign Affairs, Ministry of Education Culture Sport and Science and Technology, Nuclear & Industrial Safety Agency, Japan Nuclear Energy Safety Organisation, Japan Ministry of Land Infrastructure and Transport
  - On-route countries – Public Relations / Acceptance (3 routes)
    - Panama, Chile, Argentina, Brazil, South Africa, New Zealand, South Pacific islands...to check



# Stakeholder Management

- International challenges:
  - Customer requirements differ (Precise, Customer Specific and many / General to ISO and few)
  - Customers want different types of contracts (fixed prices or Cost Plus – Differ by risk perceptions)
    - Umbrella is reprocessing agreements which are multi-lateral (All customers share) but VRR services are bi-lateral
  - Regulators approach and cultures are different
  - On route countries need specific Public relation / Public acceptance activities
- Sellafield Ltd and International Nuclear Services partner to provide the VRR service

# Conclusions

- Return of waste is delivering on Government Policy and contractual commitments
- International considerations in waste management are unique and challenging
- VRR Programme is delivering waste returns
- The first return is underway with Landing in Japan March 2010
- Returns to Europe are planned
- Many Stakeholders requirements and expectations need managed in parallel

# First return – on its way!

