



Environmental and Technical Considerations during the Decommissioning and Recycling of Spent Fuel Transport Flasks

Ashley Finch

BNFL International Transport, Spent Fuel Services, UK

For more than 30 years, BNFL has been designing, building, operating and maintaining transport flasks for the purpose of transporting spent fuel between nuclear power plants and reprocessing facilities. The task of decommissioning these redundant transport flasks has now started, thus completing the last link in a flask's life cycle.

The aim is to decommission the transport flasks using a mixture of standard and state-of-the-art techniques, which allows for a flask's full decontamination (ALARA) and recycling whilst helping to keep decommissioning costs to a minimum.

BNFL has a stated policy of acting with environmental responsibility. This practice has preceded the recent and gradual tightening of UK laws governing the disposal of contaminated material. The result is that BNFL has considered the recycling of transport flasks as the preferred option, as the alternative route - the direct disposal of the flasks (as low-level radioactive waste) - is not consistent with new laws emphasising the recycling of materials at the expense of radioactive waste disposal.

Extensive development work with contractors has resulted in the in-situ deployment of machinery and techniques to cut up flask bodies prior to the materials being returned to the commercial market. This phase is preceded by the decontamination of much of flask's materials within BNFL's Oxide Flask Maintenance Facility, located on the Sellafield site.

The ultimate objective is to recycle as much of a redundant flask as is practicable, and thereby to minimise the amount of contaminated material to be sent for disposal. This will demonstrate the policy of a company committed to reducing the amount of radioactive waste that has to be disposed of.