14th International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 2004), Berlin, Germany, September 20-24, 2004

Paper # 132

Environmental Challenges of Decommissioning and Recycling a Nuclear Transport Ship

Mr Tom D. Pearce, BNFL International Transport, UK.

The current practice for the recycling of end-of-life vessels is investigated and contrasted against what is perceived as acceptable under current environmental legislation and guidance. The Pacific Nuclear Transport Limited (PNTL) strategy towards the decommissioning and recycling of ex-nuclear transport vessels is outlined. The policy for the decommissioning of PNTL vessels and the process of ship recycling is described in detail.

UN recommendations, together with the international, European and national laws governing waste management and their applications for ship recycling, are incorporated in the recycling process for PNTL ships. The difficulties encountered and the lessons learnt from the conventional recycling of an ex-nuclear cargo vessel are discussed, and the implications of these findings for other ship recycling proposals are highlighted.

The unprecedented degree of environmental consideration for ship recycling prior to, and during a project to decommission a British flagged nuclear transport ship is contrasted with the public perception of the conventional ship scrapping industry.

The PNTL owned vessel Pacific Crane was retired from service in December 2002. BNFL acting on behalf of PNTL developed an environmentally acceptable way of decommissioning the ship that met all the standards of the Industry Code of Practice for Ship Recycling. To ensure a high level of Environment, Health and Safety standards the project was kept within Northern Europe.

The ship was exported to the Netherlands as waste through the European Waste Regulations that satisfy the International Basel Convention. Upon arrival in the Netherlands all hazardous materials were removed and the fuel tanks were drained and cleaned. In line with the Industry Code once all identified hazards had been removed the vessel was sold through a standard BIMCO (Baltic and International Marine Council) contract for ship recycling.

The vessel was stripped and cut up using a combination of hydraulic pincers and blowtorches. The majority of the vessel was recycled directly as reusable steel.