

# B&B'S INNOVATIVE MAST HELPS BNFL IN DECOMMISSIONING NUCLEAR WASTE

BNFL Environmental Services' problem of safely retrieving approximately 10,500 partially corroded drums of Uranium Oxide and repacking them into new stainless steel overpack drums has been resolved thanks to a special rig which has been designed and built by B&B Attachments, the UK's leading supplier of forklift attachments and masts. The work was to produce the equipment for BNFL Environmental Services so that it could be used in conjunction with a specially adapted 3.5 tonne Still forklift truck.

The drums of radioactive material, each weighing approximately 1 tonne, have been stored three to four high in a special building for approximately 25 years. In line with BNFL corporate policy, the drums are to be repacked prior to being moved and stored in a central location - a process that will take between six and seven years. All equipment being used in the retrieval and repacking procedure will undergo integrated testing in September prior to going into active commissioning in October / November this year.



B&B Attachments specially designed the rig for retrieval and repacking of drums at BNFL.

When approached by the project, B&B Attachments design team went into action to design a rig capable of fulfilling the brief. Components utilised in the design and manufacture included a special mast with upper and lower lift, a sideshifting extender connected to a higher lift that can reach out to 2300 mm and semi automatic drum tongs connected to the end of the extender. A Kaup 2T415 sideshifting drum clamp with special rubber arms is connected to the lower lift. In addition, the forklift truck is fitted with two cameras and split monitors.

The driver begins the operation by picking up the stainless steel container using the drum clamp. Then, guided by the first camera, the driver activates the extender and the drum tongs to collect the drums of Uranium Oxide. When the tongs have secured the drum, the extender withdraws to the closed position. Then, utilising the second camera to direct him, the driver operates the Kaup clamp connected to the lower mast to hold the drum in place whilst the mast lowers it into the stainless steel container. The tongs are then manually released. The space between the old drum and the over-pack is filled with sand and a top bolted onto the steel container. The container is then weighed and placed onto a stillage for onward transportation.

"B&B Attachments has used its know-how and ingenuity to resolve a problem", says John Miller, Project Manager for BNFL. "During trials the rig worked exactly as we had hoped, and when we commence integrated testing at the end of September we have no doubt it will help provide us with a seamless operation that consists of retrieval, remediation and removal of this historic material".

The BNFL Environmental Services Business Group specialises in the decontamination, dismantling and removal of redundant nuclear facilities and the management and processing of historic wastes from nuclear operations in both Europe and the USA. In all UK much of the companies work comprises of waste management and decommissioning activities at the former Magnox power stations sites at Berkeley, Hunterston 'A' and Trawsfynydd, and the Windscale AGR. It also has key projects at other nuclear sites in Europe.



**B&B**  
attachments

New Mills Industrial Estate Inkpen Hungerford Berkshire RG17 9PU Tel:01488 668701 Fax:01488 668724