

BEP (Box Encapsulation Plant)

Customer: British Nuclear Group (Sellafield Ltd)
Project: Box Encapsulation Plant
Date: 1997-2004
Services: Design, Procurement, Construction & Commissioning
Value: £180 million

Scope of Work

Aker Solutions worked in Joint Venture with Carillion and AEA Technology to provide British Nuclear Group with a new Box Encapsulation Plant at Sellafield. The GC Works 1 contract was placed in 1997 following competitive tendering. Aker Solutions and British Nuclear Group achieved a partnering approach to the contract, undertaking joint design reviews and value engineering exercises.

Feature

The new works was designed to sort and encapsulate in cement a wide range of solid radioactive (Intermediate Level Waste – ILW) waste from the Sellafield nuclear reprocessing site and export boxes of encapsulated product to a purpose built store for immediate storage pending the completion of the UK nuclear waste repository.

All equipment will be housed in a purpose built building.

The types of waste to be encapsulated includes redundant machines and pumps, uranium pieces, reactor furniture, magnesium, scrap metal, plate metal, containers and organics.

The plant features:

- Remote mechanical handling (including manipulators) for sorting and size reduction,
- Shielded cells for main process plant,
- Cementing and grouting of waste in specially designed 3m³ capacity high integrity box
- Radioactive content assay by gamma spectrometer and passive neutron counter

