

Radwaste Plant – Sizewell ‘B’

Customer: British Energy (Formerly Nuclear Electric)
Project: Radwaste Plant – Sizewell ‘B’
Location: Sizewell ‘B’ Power Station
Services: Process Design, Engineering, Procurement, Construction,
Pre-commissioning and Testing
Value: £56.5 million

Description

On behalf of British Energy, Aker Solutions performed the process design, engineering and management of procurement, construction and pre-commissioning testing of the Radwaste Plant at Sizewell ‘B’, Britain’s first PWR power station.

The contract also involved specialist radiological and safety work including HAZOP studies, radiological zoning, shielding design, failure mode and effect analyses and dose/exposure calculations.

The plant processes active gaseous, liquid and solid waste arising from the power station operations.

Gaseous wastes are treated by adsorption using a carbon bed delay system which holds up the active xenon and krypton for a sufficient length of time to ensure decay to acceptable levels prior to discharge.

Liquid wastes are processed by a combination of filtration, decay hold-up and ion exchange, although, if necessary, the treated liquids can be passed through an evaporator.

Low-level solid wastes are incinerated or compacted before drumming and storage. Another incinerator is available to burn waste oils arising in the power station.

Intermediate level solid wastes are encapsulated in either cement or polymer, the most suitable medium being selected for the particular wastes being encapsulated at any given time. The encapsulation facility is fully automatic and remotely operated and incorporates special viewing, ventilation, lighting and heating systems.

All drummed wastes are stored on site. A largely automatic stacked storage system is used incorporating special arrangements for tracing and retrieval of the drums.



Manpower Levels

- 200 (Home Office)
- 70 (Commissioning)