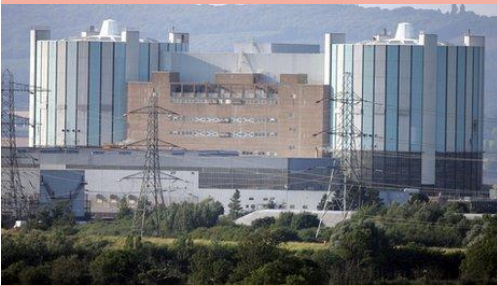


Nuclear Decommissioning at Oldbury

Power | Case Study

The Client

Magnox Ltd, owned by the Cavendish Fluor Partnership, is the management and operations contractor responsible for safely managing ten nuclear power stations and one hydroelectric plant in the UK on behalf of the owner, the Nuclear Decommissioning Authority. Magnox oversees all aspects of electricity generation, defuelling and decommissioning until the end of the station's life. This is followed by Final Site Clearance and reactor dismantling before the site is released for a new use.



Key Figures

- Reduced costs by 50%
- 26m³/day demineralised water
- £150,000 per year savings
- MODI trailer changed monthly
- Reduced maintenance and manpower requirements

Veolia Water Technologies UK

Windsor Court, Kingsmead Business Park,
High Wycombe, HP11 1JU
Tel: +44 (0)1628 897000
Email: sales.watertech@veolia.com
Web: www.veoliawatertechnologies.co.uk

The Client's Needs

Oldbury Power Station, on the River Severn near Bristol, was commissioned in 1967. It had two Magnox reactors producing a total of 424 MWe. The station began to shut down in 2012 after producing some 137.5 TWh over 44 years of safe and successful operation. Generation ceased at the end of 2013 and Oldbury is now being defuelled



Nuclear power generation at Oldbury consumed some 910m³/day of demineralised water for steam raising and cooling but, once generation ceased this reduced to about 26m³/day. This meant that the on-site demineralisation plant was larger than required and costly to maintain, so Magnox wanted to decommission and remove it. But they still needed a supply of demineralised water. They turned to Veolia Water Technologies.

The Solution

Veolia is currently providing the demineralised water requirement at Oldbury using a MODI trailer mounted mobile demineralisation plant. This provides ion exchange demineralisation using similar technology to the station's on-site plant but at the much reduced flow. Instead of in-situ regeneration, when the ion exchange resins become exhausted the MODI trailer is simply returned to Veolia's central media regeneration station. This means that there is no requirement for chemicals or for effluent disposal which could create health and safety issues and interfere with the defuelling work. The MODI trailer is remotely monitored by Veolia and is currently changed every month. Magnox has calculated that this reduces the costs by 50% compared with operating the on-site plant and has also allowed early removal of the redundant demineralisation plant.