

Magnox storage pond clean-up

Case Study



James Fisher Nuclear is assisting Sellafield Ltd and the Nuclear Decommissioning Authority to investigate the first generation Magnox fuel storage pond with a view to its eventual decommissioning

During its 26 years in operation, the 1950s-constructed facility processed 27,000 tonnes of fuel from UK Magnox reactors. The pond holds some 14,000 cubic metres of contaminated water where the Magnox fuel is stored, radioactive sludges and miscellaneous nuclear wastes and skips are present.

James Fishers Nuclear's Remotely Operated Vehicle (ROV) development team has been supporting the project developing and deploying mini submarines to survey the contents of a first generation fuel pond. Two underwater vehicles were deployed by the team enabling them to access video and map the contents of the 1,200 plus storage skips in the pond.

Who
Sellafield Limited

Summary
The project was to progressively retrieve and treat the facility's radiological inventory, reducing the on-going risk posed by its storage and then reducing the inherent hazard posed by the materials.

- Services provided**
- Provision of the 'Videoray mini-ROV' vehicle to assist in the clean-up due to its robust design, ease of use and excellent track record in the nuclear industry
 - Development of special tools to assist with surveys, including a boom camera with variable light brightness control, and a fail-safe manipulator

- Benefits delivered**
- Underwater vehicles provided data on skip contents, position and condition
 - Success of this work paves the way for further recovery efforts to repack fuel skips and enable their removal from the pond
 - The project and its success is a powerful demonstration of the ability of James Fisher Nuclear to work with leading partners to take on some of the toughest challenges of nuclear decommissioning

