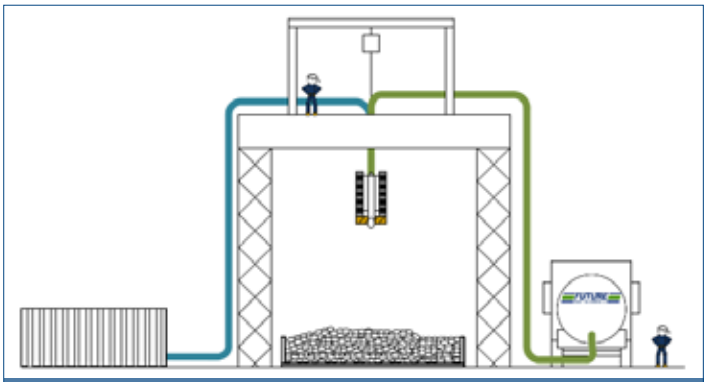
Sellafield: Trial Specification (Non-Man Entry Method)

CLIENT: SELLAFIELD

Zone 1 Control Station

SUPPORT & CAPABILITY

- We offer various services to the Nuclear and Radioactive industry, including metal decontamination and recycling, sorting and segregating and disposal. This case study demonstrates how our Specialist Industrial Services teams support these efforts.
- Providing Specialist Industrial Services for over 25 years, Future Industrial Services (FIS) have vast knowledge, expertise and experience of delivering specialist cleaning projects.
- Through the recent investment of a non-man entry Zone 0 ROV, FIS is offering alternative options for cleaning requirements.
- The non-man entry Zone 0 ROV is fully supported with Atex Zone 1 mobile equipment container and control station with Zone 0 100m umbilical.



Demonstration of scaffold set up, aggregate and ROV being lowered

ROV trial in progress

PROJECT BACKGROUND

Future Industrial Services (FIS) were contacted by Sellafield to submit a quotation for a trial regarding a potential project to displace a contaminated FLOC and residual waste from the active tank. The scope required the material to be efficiently transported 15 metres vertically using a non-man entry “Gerotto” Remote Operated Vehicle (ROV) method supported by specific equipment.

DELIVERY PROPOSAL

The trial was carried out to prove the method is suitable and to give information around the duration of the potential work on site.

A scaffold tower was erected at the FIS depot in Hull. This acted as the operations floor with an opening of 1200mm (diameter) to mirror the openings of the onsite tanks. The scaffolding was at a height of 15m, to mirror the tanks on Sellafield which are 15m below ground, and the ROV would be lowered in from above.

The aggregate ranged from Type 1, pea gravel and a sand, mixed with a flocculant to replicate what’s in the tanks on Sellafield, and placed in a contained area at the base of the scaffolding.

A 16m³ liquid ring vacuum tanker was stationed beside the scaffold tower. A Zone 1 control station (shipping container) was placed within 100 metres of the scaffold. The vacuum hose from the tanker was connected to the ROV prior to entry. The umbilical was connected from the control room to the ROV prior to entry.

The ROV was lowered down from the top of the scaffolding towards the base and began agitating and removing the aggregate and flocculant.

The trial was recorded inside the tank by the ROV and also recorded externally over the duration. A report was compiled and issued to Sellafield with recommendations, lessons learned, % efficiency of materials that were displaced and anticipated duration for the project.

The FIS technical team was on hand throughout the trial to offer knowledge and experience required to improve performance. Additional equipment and accessories for the ROV were onsite and available throughout the trial.

FIS technical team monitoring

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