

News story: Diving into innovation at Sizewell

The team of American underwater experts tackled their first UK 'nuclear dive' at Dungeness A in 2016 where, wearing full protective suits and shielded from radiation by the water, they were able to cut up empty fuel storage skips and retrieve other pieces of submerged equipment.

The ponds were used to store thousands of used nuclear fuel rods, held in metal skips, after they were discharged from the reactors. After the last of the fuel was transported to Sellafield for reprocessing, the skips and a range of redundant items, including sludge, were left behind in the water.

Pond clean-out conventionally takes place using remotely operated equipment to lift the whole radioactive skips clear of the water, exposing them to the air, where they are carefully cut up before decontamination, storage and eventual disposal. This process is slow with potential radiation dose risks for workers.

By doing the work under water, the divers can cut up the skips more safely, access awkward areas more easily, making the whole process safer, faster and more productive.

Now the lessons learned at Dungeness are being put into practice at Sizewell A pond as part of a decommissioning project that will take around 10 months to complete.

Steve Franks, Sizewell A Site Ponds Programme Manager, said:

The scale of work to be delivered by the divers is huge. Although we only have one pond to decommission, the inventory of the ponds is larger than at Dungeness A but we will still be looking to speed up the work wherever it is safe to do so.

In addition to a reduction in the overall radiation dose for workers, compared to traditional methods, the diving technique has a lower environmental impact, ultimately providing value for the UK taxpayer.

The first dive took place recently and focused on surveying the pond floor, transferring sludge into a purpose-built tank, setting up cutting equipment and size-reducing the first of 35 skips, which are classified as Intermediate Level radioactive waste.

The site is owned by the Nuclear Decommissioning Authority (NDA). Geoff Suitor, Head of the Magnox Programme for the NDA, said:

Magnox's implementation of innovative approaches, such as the use

of divers to handle radioactive waste in ponds, contributes to real progress in reducing risks and hazards at the Magnox sites. Together, we are successfully cleaning up and making safe the UK's earliest nuclear sites on behalf of our communities and the environment.

During more than 250 dives at Dungeness A, a number of new ideas emerged including the use of lightweight plastic platforms for divers to stand on when exploring uncharted areas of the pond floor.

The team of 12 nuclear divers is supplied by US contractor Underwater Construction Corporation (UCC), which also carried out the Dungeness A project.