News story: NDA shows off its expertise on the world stage

Addressing hundreds of delegates at the 2018 Civil Nuclear Showcase, Dr Simper told the audience that “all aspects of the NDA’s experience is commercially available”.

Run by the UK’s Department of International Trade, the event promotes opportunities for international collaboration across all areas of the nuclear sector.

Dr Simper highlighted the progress being made in decommissioning and hazard reduction at the NDA’s 17 nuclear sites across the UK, including:

- the removal of waste from the oldest and most challenging plants at the Sellafield site in West Cumbria
- the removal of almost all of the spent nuclear fuel from the Magnox nuclear reactors
- innovative technology being used to safely carry out decommissioning work in a variety of challenging and hazardous environments

Dr Simper said:

> The UK nuclear industry leads the world in many areas of its work to decommission and clean up the legacy from the earliest days of the civil nuclear legacy,
>
> Even though we have different reactor types, our waste management, decommissioning and spent fuel management capabilities are very applicable to Japan, Taiwan, Korea, China and other markets.
>
> We are eager to work with international suppliers and industry colleagues, maximising the benefit of our learning and experience.

The event provides an opportunity to network with a diverse mix of senior international and UK delegates representing government, utilities, technology providers, major contracting companies and all tiers of the supply chain.

Recently, technology that was developed through NDA funding was used to measure radiation levels in the damaged Fukushima reactors. The RISER drone carries a sophisticated radiation detection and mapping system which was originally used to examine conditions in the remaining Windscale Pile chimney at Sellafield.

News story: Record-breaking turbines leave Wylfa

The last remaining Proteus Gas Turbines in use anywhere in the world were stood down on 20 January 2018 after 47 years of faithful service

Wylfa is seeking a new home for 5 ageing back-up generators whose illustrious cousin, the Rolls-Royce Proteus Gas Turbine Generator, famously powered Donald Campbell's Bluebird CN7 as it smashed the world land speed record in 1964.

The first 4 generators, each capable of 3MW output, provided essential standby electricity in the event that normal supplies were lost.

In 1983, a fifth Proteus turbine was installed to provide additional power to Wylfa's Secondary Dry Store Cells, used to hold spent nuclear fuel after being removed from the reactors.

They were believed to be the last remaining Proteus Gas Turbines in use anywhere in the world but, after 47 years of faithful service, they were stood down on 20 January 2018.

When electricity generation at Wylfa ended in 2015 the site's Electrical Overlay System was capable of providing back-up electricity supplies and there was no further need for the gas turbines.

The Proteus engine has a distinguished history: having seen naval service in fast torpedo boats, powered the Bluebird CN7 car used by Donald Campbell to break the world land speed record in 1964, powered cross-channel hovercraft until 2000 and provided essential supplies to Magnox's Oldbury Power Station in Gloucestershire.

The gas turbines will be disconnected and all potential hazards removed, such as oils and batteries, before the asset disposals team sets about finding them a new home.

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News story: Liquid waste made safe

Highly radioactive liquid, known as raffinate, has been stored in tanks for around 20 years after being produced as a by-product of Prototype Fast Reactor (PFR) fuel reprocessing.

A project is underway to reduce the risk by filling more than 30 drums with 15,000 litres of solid waste as part of an initial commissioning process.

Project Manager, Stuart Andrew, explained:

> One of the reasons that this material is so hazardous is because it is in a mobile, liquid form.
>
> We are taking an exact amount of liquid waste from each tank to create a consistent blend. It is then mixed with cement, pulverised fuel ash and lime powders to create a stable solid waste package.

Waste Director Sam Usher added:

> This is probably our highest single remaining hazard at Dounreay. Safely and compliantly creating the first solid waste drums is a huge achievement for the team and a major step forward as we deal with the site's legacy hazards.

It has taken almost 2 years to modify the plant and equipment which was previously used to process more than 230m³ of Dounreay Fast Reactor raffinate.

Up to 100 drums are expected to be produced in the next few months, as part of the first phase of this programme, with all PFR raffinate expected to have been processed within the next 5 years.

Mark Raffle, Lead Programme Manager from the Nuclear Decommissioning Authority, said:

> Immobilisation of this highly radioactive liquid will be a significant step towards reducing the remaining hazards at Dounreay.
>
> Completion of this work will enable decommissioning of the major facility where the material is currently stored, moving the site closer towards its interim end state.

Suppliers are being asked to express their interest in a contract to construct an extension to the facility where the waste packages will be stored – in accordance with the Scottish Government's higher activity radioactive waste policy. The multi-million pound project is expected to begin later this year.

Notice: EX17 1HN, Graphic plc: environmental permit issued

The Environment Agency publish permits that they issue under the Industrial Emissions Directive (IED).

This decision includes the permit and decision document for:

- Operator name: Graphic plc
- Installation name: Down End
- Permit number: EPR/PP3239RN/A001