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NDA Monthly Update

December 2019

Summary

- £8.5 million R&D competition latest
- Satellite data to help nuclear clean-up
- Success for DRS managing director
- Radioactive waste in the spotlight
- Royal visit marks dialogue with Japan
- NDA honours safety excellence
- NDA names new Non-Executive Director
- History made as plants complete defueling
- Daily grind foiled at Chapelcross
- Magnox Ltd becomes NDA subsidiary
- Special delivery marks Sellafield milestone
- Tallest stack cut down to size
- Successful start to repackaging plutonium

Diary Dates

Early 2020: Update of UK Radioactive Waste & Materials Inventory

14 January: Space Data Challenge judging at QE2 Centre, London

29 January: PhD seminar 2020, Manchester Conference Centre.

End of December: NDA publishes annual draft Business Plan for consultation

Consortia in next stage of £8.5 million R&D competition

Two consortia, led by Barron and Wood, have reached the next round of an £8.5 million innovation competition that could help decommission highly radioactive facilities at Sellafield. Launched in 2017, the £8.5 million Integrated Innovation in Nuclear Decommissioning competition was funded by the NDA, Innovate UK and BEIS. The successful projects were among five consortia, comprising almost 30 organisations, and will now demonstrate their work at Sellafield.

[Weblink: Projects move to next stage](#)



Satellites set to help clean up nuclear sites

The NDA is collaborating with the UK Space Agency (UKSA) to explore whether data collected by satellites orbiting the earth could be turned into useful insights for the nuclear clean-up mission. The Nuclear Decommissioning Space Data Challenge was launched by the UK Space Agency in November, and is aimed at smaller businesses and academic start-ups. On offer is a prize worth £10,000, sponsored by the NDA, to help the winning concept or prototype product on the journey to market reality. Short-listed applicants will be invited to a judging event in January.

[Weblink: Space data challenge](#)

DRS Managing Director wins at Women of the Year Awards

Debbie Francis, the Managing Director of NDA rail subsidiary Direct Rail Services, has won the award for 'demonstrating the courage to challenge and make a real difference in a male-dominated industry'. The Women of the Year event, attended by more than 500 people, aims to promote positive female role models who provide inspiration across all areas of society and the business community. Debbie's 'Woman with Edge' award recognises business women who challenge the status quo and understand the road to success is not always straight.

[Weblink: Debbie, a woman with edge](#)

Radioactive waste in the spotlight

The NDA joined forces with the Nuclear Institute for the Integrated Waste Management Conference 2019, held in Penrith. More than 250 delegates attended the two-day for a packed programme that included panel sessions, exhibitions and a range of speakers including government officials, regulators, supply chain companies, consultants and waste management experts. Earlier this year, the NDA launched its Radioactive Waste Strategy.

[Weblink: Hundreds gather for waste discussions](#)

Royal visit marks long-standing dialogue with Japan

Her Royal Highness The Princess Royal heard first-hand how the UK and Japan are collaborating on nuclear decommissioning when she attended a reception at the British Embassy in Tokyo. NDA Strategy and Technology Director Dr Adrian Simper was among the presenters discussing the knowledge exchange between the two countries. He also outlined the NDA's commitment to working in partnership with local communities, and the sharing of decommissioning knowledge as Japan continues the clean-up at Fukushima Dai-ichi.

[Weblink: Collaborating on nuclear decommissioning](#)

NDA honours safety excellence at top awards

Shining examples of safety and wellbeing in the nuclear industry were honoured at the NDA's awards ceremony. The first Safety and Wellbeing Awards, held in Manchester, recognised the exceptional work being done across the group. Eleven winners picked up awards in front of



around 250 people at the ceremony. All were chosen for their achievements and successes in keeping the workforce safe and well.

[Weblink: Safety achievements recognised](#)

New Non-Executive Director joins NDA Board

The NDA has announced the appointment of Michelle Heath to its Board as an additional Non-Executive Director for a three-year term. Michelle has a 20-year track record in the nuclear industry, focused on waste management, having previously worked for BNFL, Springfields Fuels and Westinghouse Toshiba. She holds an MBA and BSc from Lancaster University.

[Weblink: Welcome to new Non-Executive Board member](#)

History made as plants complete defuelling

The last nuclear fuel has been safely shipped from Wylfa on Anglesey, and Calder Hall in Cumbria, for reprocessing at Sellafield, marking a major decommissioning milestone for the UK. The completion of defuelling at both former nuclear power stations removes 99% of radioactivity from the sites. Wylfa, the last and largest of the UK's Magnox power station fleet, opened in 1971 and closed in 2015. Calder Hall, by contrast, was the world's first nuclear power station to generate electricity on a commercial scale. Opened by the Queen in 1956 amid a national fanfare, it was hailed as the dawn of the atomic age and led the way for 10 further power stations based on the Magnox design. Electricity generation stopped in 2003.

Weblink: [Wylfa completes defuelling](#)

[Calder Hall completes defueling](#)

Daily grind foiled at Chapelcross

The daily grind is looking up after foil coffee bags perked up a project to prevent radioactive gases from escaping during work to decommission the nuclear site. The packets – which use technology designed to keep coffee aromas locked in - mean workers can safely seal radioactively contaminated waste into bags so it can be more easily and safely handled. The idea was brewed by experts at the Culham Centre for Fusion Energy in Oxfordshire, and is now being trialled during work to dismantle Chapelcross' former processing plant that had become contaminated with radioactive tritium as a historical legacy of its operations.

[Weblink: Clean-up inspired by coffee bags](#)

Magnox now an NDA subsidiary

Magnox Ltd has become a wholly owned subsidiary of the NDA after ownership transferred from the Parent Body Organisation, Cavendish Fluor Partnership, on 1 September. The transfer follows the announcement in July 2018 and marks a new approach to managing the UK's 13 Magnox sites - 10 former nuclear power stations, two nuclear research sites and a hydroelectric plant. The change in management structure follows a similar change at Sellafield in 2016, where the new model is facilitating progress and providing increased value for money for the taxpayer.



[Weblink: Ownership of Magnox Ltd transfers to NDA](#)

Special delivery marks Sellafield milestone

One of the most important construction projects at Sellafield took a major step forward when two huge vessels arrived at Sellafield's Box Encapsulation Plant (BEP). BEP will play a vital role taking nuclear waste retrieved from original waste plants, primarily the Magnox Swarf Storage Silo, and boxing it up for safe storage in a modern building. The complex vessels, manufactured in Carlisle, will collect and sample highly active effluents before transfer to a specialist facility that manages the material.

[Weblink: Vital vessels to help deal with waste](#)

Tallest stack cut down to size

The demolition of Sellafield's tallest stack is almost complete. A nine-metre stub is all that remains of the First Generation Reprocessing Plant stack after a 30-month project to painstakingly remove 52 metres by hand. Its proximity to hazardous nuclear buildings on the site meant traditional explosive techniques were out of the question. Instead, workers cut away the concrete and steel stack while standing on a platform which clung to the chimney using friction alone. Before demolition could start, the platform had to climb to the top of the chimney, like a monkey shinning up a tree. It took 10 months to inch its way to the peak: 122 metres above the ground.

[Weblink: Demolition nears completion](#)

Successful start to repackaging plutonium

One of the most important risk reduction tasks in the UK nuclear industry has achieved its first milestone. Experts at Sellafield opened and repacked a historic plutonium can for the first time as part of a £1 billion programme to address a degradation risk identified in a small proportion of the canisters, which date from about 50 years ago. The highly skilled work requires operators to deftly manoeuvre the package inside a sealed glovebox. The material was originally placed in an inner can wrapped in a plastic casing and placed into an 'overpack' can. But in a small proportion of packages, the outer can has shown signs of degradation. The task is to take the inner can out of the 'overpack', clean off as much plastic as possible, then reseal it in a modern robust outer can. The first successful repackaging kicks off a 5-year work programme.

[Weblink: First milestone in risk reduction task](#)