

08/09 PERFORMANCE



Dounreay Site Restoration Ltd

Site clean-up performance report for **August 2009**

www.dounreay.com

Shaft moves up a gear

One of the most demanding clean-up jobs ever undertaken in the history of nuclear energy is gathering pace.

It involves the recovery and packaging of more than 1500 tonnes of radioactive waste that has lain submerged for up to 50 years in the ground beneath Britain's abandoned experiment with fast reactors at Dounreay.

Tests are underway in Scotland, Germany and the USA to develop the heavily-shielded plant that will sift and package the hazardous debris once it is brought back to the surface.

Later this year, work is expected to begin on a scheme design for the robotic machinery that will descend up to 65 metres below the surface to recover the waste from its watery resting place.

Detailed designs will be ready by 2012, when construction companies worldwide are expected to bid for the contract to build the major plant needed to empty the two separate vaults.

"We're on course to start construction in 2013, with the first waste due to come to the surface in 2017," said Steve Efemey, project manager at Dounreay Site Restoration Ltd.

The oldest of the two facilities is an unlined shaft, 65 metres deep. A second vault – a concrete box – sits just beneath the surface and is known as the wet silo.

Randall Bargelt, regional director at NDA, said: "I am delighted that DSRL are progressing with reducing hazard at Dounreay, using world-class innovative solutions to remotely retrieve and package the wastes from the shaft and silo for future safe storage."

The total estimated cost of decommissioning the shaft and silo is approximately £290 million.



1 8 6 months until shutdown



PROGRAMME PERFORMANCE REPORT

August 2009

PROGRAMME DELIVERY

Schedule Performance Index (SPI)

Year to-date	Year-end forecast
0.97	1.00

* SPI measures work actually carried out against the agreed NDA schedule.

Cost Performance Index (CPI)

Year to-date	Year-end forecast
1.10	1.05

* CPI measures the cost of work actually carried out against the forecast agreed with the NDA. A figure of 1.0 equals the cost agreed - greater than one reflects efficiency gains.

Performance Based Incentives (PBI)

Year to-date earned	Year-end maximum forecast
£601K	£4.55 million

* PBI are agreed milestones with NDA which result in payment of fee.

PRODUCTION

	August	2009 - 2010
Exempt waste removed from site:	13.7 tonnes	25.7 tonnes
Low-level waste processed for disposal:	479 drums	2064 drums
Raffinate liquor converted to solid intermediate-level waste:	66 drums	627 drums

HEALTH & SAFETY

Number of reportable radiological events:	0	0
Number of events on International Nuclear Event Scale:	0	0
Number of Lost Time Accidents (LTA):	0	0
Total Recordable Incident Rate: <small>Compares injury and illness rates per 20,000 hours worked</small>	0.32	
RIDDOR reportable occurrences:	0	0
Hours worked since last LTA:	1,840,000	
Average radiation dose to DSRL workforce:	0.05 mSv	
Average radiation dose to non-DSRL workforce:	0.05 mSv	

Stated doses are one month behind, due to processing time.

ENVIRONMENT

Events reported to regulator:	0	0
Amount of paper recycled:	0 kg	18,500 kg
Amount of metal recycled:	0 kg	36,040 kg
Amount of cardboard recycled:	0 kg	7,270 kg
Particles recovered from local beaches:	1	16

PEOPLE

Full time DSRL staff:	911
Part time DSRL staff:	67
Contractor staff:	983
Gate-held passes (infrequent users):	117



DSRL delivered 97 per cent of its clean-up programme for four per cent less than estimated, reducing the cost to taxpayers and the Nuclear Decommissioning Authority by £6 million, according to the annual report of parent body UKAEA.

Other achievements by DSRL included 88 per cent of performance-based incentives met, all emissions with

limits, demolition of the plutonium criticality laboratory, almost 5000 drums of low-level radioactive waste processed and more than 600 drums of intermediate-level waste from processing of historic liquors.

There has been a significant reduction in injuries and no nuclear incidents since the NDA took ownership of the site. Regional director Randall Bargelt said: "DSRL has made

excellent progress in the past four years and the NDA is very proud of the role it has had to play in that. These improvements are directly in line with the NDA's strategic priorities of encouraging the highest standards in safety, security and environmental management, and driving hazard reduction."

UKAEA donates £2500 to Dounreay Communities Fund for each month without a Lost Time Accident (LTA)



Total = £12,500

DFR

A further seven batches of liquid metal lifted from Dounreay Fast Reactor were destroyed, taking the total to 43 and keeping the decommissioning team on course to complete 75 batches by March 2010.

PFR

The final transfer of available sodium from the sodium tank farm to the destruction plant was completed. It was followed by a visual inspection of the tanks which confirmed that no sodium remained that was viable for processing through the plant, allowing the tank farm pipe bridge to be "de-energised" ready for decommissioning.

Sodium samples taken from one of the "dirty dump" tanks returned higher than originally estimated tritium levels in the sodium, resulting in modifications to the ventilation system. The "hockey stick" associated with this tank was cleaned successfully, and 15 tonnes of clean steelwork removed.



Fuel Cycle Area

Emptying of the D1251 workshop drum store continued, with a further 12 drums transferred. The first section of pond area duct was decontaminated.

The "screw bed reactor" used in the former uranium recovery plant was decontaminated, allowing uranium to be recovered. In the plant itself, removal of billet line B gloveboxes was completed.

Surveys were carried out to support declassification of the Amber Area.

Dismantling of the redundant primary ventilation extract ductwork in the Pulsed Column Laboratory was completed and progress made to decontaminate the room.

Coring of the floorslab was completed in the former materials test reactor fuel reprocessing plant.

Waste management

Work has started on providing inspection ports for a camera inspection of the silo.

Ground works continued on underground services and ducts in the vicinity of the proposed major new intermediate level waste treatment plant

Safety

An independent audit of health and safety at Dounreay has placed the site in the highest category of good practice. The site's health and safety processes underwent a gruelling week-long audit by the British Safety Council and emerged with a coveted five-star award.

Environment

More than 100 particles were removed from the seabed – 27 of them a "significant" risk to public health – in the latest phase of work offshore to clean up the legacy of historic discharges.



Two areas of low-active contamination were detected during a survey of land earmarked for the disposal of the site's solid low level waste. An investigation was carried out and regulators informed.

General

A series of presentations took place about the new pension arrangements for DSRL staff

when the company moves into the private sector, probably early next year.

Prince Charles set the seal on a £4 million community project that secures the story of Dounreay in the history of the area, when he officially opened Caithness Horizons in Thurso.



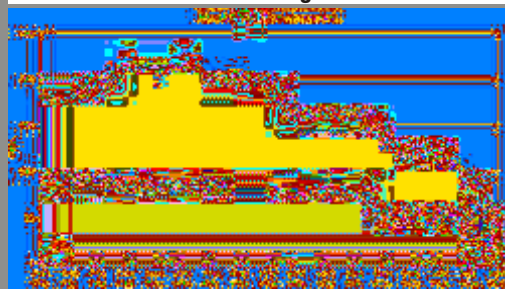
Six young people started their apprenticeships with the site training department in August.

Visitors

Jamie Stone MSP and Liam McArthur MSP

Site closure programme at-a-glance

Forecast staffing levels



Annual funding limits set by NDA

2009/10 (confirmed) £156.7 million	2010/11 (provisional) £154.8 million	2011/12 (provisional) £183.7 million
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Date	Milestone	Cumulative cost
2010	MTR reprocessing plant decommissioned	
2013	Bulk liquid metal destroyed at DFR	
2014	LLW disposal site opens	
2016	Breeder removed from DFR	
2018	High-active liquor tanks emptied	
2021	Fast reactor reprocessing plant decommissioned	
2023	Shaft and silo emptied	
2025	All redundant facilities cleared	Interim End State - £2.6 bn
2027	Low level waste site capped	
2057	Intermediate-level waste removed	
2078	Fuel and waste stores cleared	
2294	All land available for re-use	End State - £3.2 bn

NDA competition for DSRL

- Industry day for bidders – Winter 2009
- Tendering – Autumn 2010
- Preferred bidder – Spring 2011
- New company takes over DSRL – Autumn 2011

