

01/10 PERFORMANCE



Dounreay Site
Restoration Ltd

Site clean-up performance report for
January 2010

www.dounreay.com

Third tank to go

Preparations for the removal and clean-out of the third of the “dirty dump tanks” got underway at the Prototype Fast Reactor.

The large cylinder was isolated and disconnected from its support structures, ready to be hoisted out.

Once an integral part of the heat transfer system, two of the four metal tanks have already been safely removed from the redundant plant. The solidified sodium, which resembles pink putty, is then dug out using high powered chisels ready for size reduction and disposal.

Three of the tanks formed part of the reactors protection system, where sodium from the secondary circuits could be dumped in case of emergency and the fourth and largest tank was part of the system that cleaned and filtered the sodium before it was pumped back into the secondary sodium circuit.

Removal of all four tanks is expected to be complete by May this year, paving the way for the next phase of stripping out the former reactor building.



1 8 1 months until shutdown



PROGRAMME PERFORMANCE REPORT

January 2010

PROGRAMME DELIVERY

Schedule Performance Index (SPI)

Year to-date	Year-end forecast
0.97	0.99

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

Cost Performance Index (CPI)

Year to-date	Year-end forecast
1.12	1.10

* 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
£3.48 million	£4.87 million

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

PRODUCTION

	January	2009 - 2010
Exempt waste removed from site:	11.14 tonnes	78.44 tonnes
Low-level waste processed for disposal:	452 drums	4,332 drums
Raffinate liquor converted to solid intermediate-level waste:	53 drums	515 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>	0.43	
RIDDOR reportable occurrences:	0	0
Hours worked since last LTA:	3,440,000	
Average radiation dose to DSRL workforce:	0.09 mSv	
Average radiation dose to non-DSRL workforce:	0.09 mSv	

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

ENVIRONMENT

Events reported to regulator:	0	0
Amount of paper recycled:	5,557 kg	30,507 kg
Amount of metal recycled:	11,720 kg	101,000 kg
Amount of cardboard recycled:	3,383 kg	18,133 kg
Particles recovered from local beaches:	0	28

PEOPLE

Full time DSRL staff:	909
Part time DSRL staff:	61
Contractor staff:	998
Gate-held passes (infrequent users):	136



An underwater robotic arm used in the oil and gas industry will be helping Dounreay workers clean out radioactive cells.

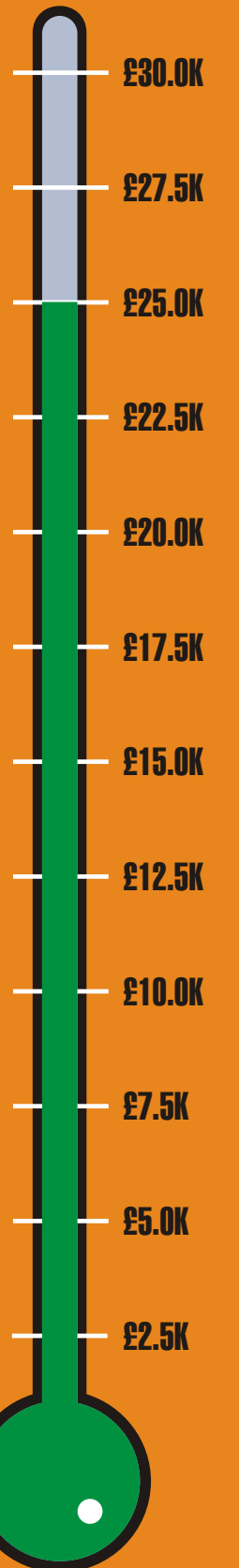
The manipulator will segregate and package up low and intermediate level waste removed from inside concrete cells as the clean-up of the materials test reactor reprocessing plant gathers pace.

The arm, a high-tech device made from titanium, sits in a dedicated stainless steel enclosure surrounded in lead shielding.

DSRL senior project manager **Tom Johnston** said the waste packing process involved extensive development and design work.

"This waste handling and consignment system is a key step of the bespoke integrated waste management process which has been designed to safely remove the waste materials from the cells, while keeping the doses to workers as low as possible," he said.

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



Total = £25,000

PFR

A remote camera inspected the reactor strongback, plenum and diagrid areas. With the exception of the heel pool, there are no significant amounts of sodium remaining in the vessel.

The first three batches of liquor from the PFR temporary storage vessel were successfully processed.

The sodium inventory disposal plant met its target of destroying 72kg of alkali metal from waste packages.



Emptying of the remote-handled intermediate level waste (RHILW) drum store resumed, with another 30 drums removed.

Decommissioning started of the redundant overhead crane in the D1207 area.

DFR

The liquid metal destruction plant successfully completed its 75th batch, earning the site a performance-based incentive from the NDA, prior to a planned shutdown for maintenance.



Pond liquor removal commenced with discharges at limit of detection following ion exchange treatment. Lowering pond levels in a controlled manner allows essential pond wall dose rate measurements to be carried out in support of the decommissioning strategy.



SHAFT AND SILO

Work started on the installation of a new low-active drain at the site of the proposed construction works.

WASTE

The Scottish Government launched a consultation on its policy for higher-activity waste. The outcome will affect the management of Dounreay's intermediate-level waste in the long-term.

SAFETY & ENVIRONMENT

At the end of January, the site had recorded 338 days, or 3.4 million man-hours, without a lost-time accident.

The site-wide safety challenge to complete 60 days without an electrical non-compliance continued, with a number of items found to be outwith their PAT date.

DSRL has been asked to make some minor revisions and modifications to its application to the Scottish Environment Protection Agency for a new authorisation under the Radioactive Substances Act.

DSRL sought a variation to its permit from the Scottish Environment Protection Agency governing the use of cement in a waste processing plant.

GENERAL

The Nuclear Decommissioning Authority announced funding for Dounreay would be capped at £150 million a year from 2011 onwards. This is how much bidders in the NDA competition for Dounreay will be expected to complete its decommissioning for.

The Nuclear Decommissioning Authority published its 2010 business plan for consultation. This sets out the key goals for Dounreay in the next 12 months.

A number of organisations took part in a workshop looking at Dounreay's heritage as part of the consultation phase of the site's heritage strategy.

Kenny Ferrera of CH2MHILL joined the senior management team as head of programme office. AMEC's **Michael Fitt** was named as the head of the site's construction team.

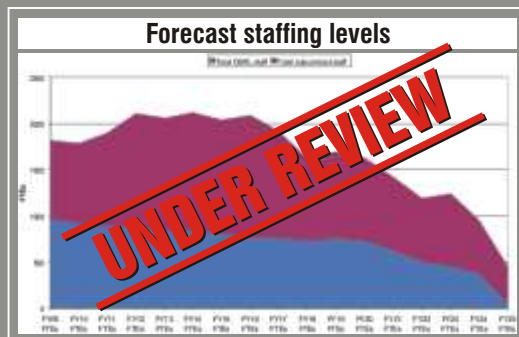
Kevin Thomas, group business development director of Babcock International Group, toured DFR with **Paul Barrett** as part of a familiarisation visit.

FUEL CYCLE AREA

Dynamic testing of the new ventilation fans was completed successfully as part of the installation of the new D1209 ventilation system.



Site closure programme at-a-glance



Annual funding limits set by NDA		
2009/10 (confirmed) £156.7 million	2010/11 (confirmed) £166 million	2011/12 (provisional) £150 million

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	Start liquid metal destroyed	
2025	All low-active 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 days for bidders	– Feb/Mar 2010
• Tendering	– Autumn 2010
• Preferred bidder	– Spring 2011
• New company takes over DSRL	– Autumn 2011

