11/09 PERFORMANCE

Dounreay Site Restoration Ltd

Site clean-up performance report for
November 2009

www.dounreay.com

Clean-out yields more nuclear material

Decommissioning of plants such as the uranium recovery facility is yielding small amounts of nuclear material that had been held up in the chemical works.

Chemical plants used to process nuclear materials for 40 years are yielding small amounts of fissile material during their clean out and dismantling.

Small amounts of enriched uranium that entered the plants during their operation were recorded as “unaccounted for” when they became trapped in nooks and crannies of inaccessible pipework and equipment.

The clean-out and dismantling of these areas means the material is now being recovered, with the site's inventory showing an apparent 'gain' in nuclear material stocks, counterbalancing those years of operation when it had shown an apparent 'loss'.

A five-year drum repacking project in the billet production plant has detected more of this nuclear material.

Over two hundred waste drums full of material produced during historic operations were inspected, assayed and repacked for safe long-term storage.

During the work, operators opened up the old packaging and confirmed that there was more uranium trapped in the waste than had previously been measured.

“The equipment that we are using to assay the waste is far more accurate than that available when the drums were originally packed,” explained decommissioning engineer **Bob McKiddie**.

“We had suspected that the historical results had under-estimated the uranium content in a number of waste items. The repackaging work has resulted in an overall gain in the amount of uranium declared.”

183 months until shutdown

Monthly Performance Report- November 2009

Dounreay Site Restoration Ltd

PROGRAMME PERFORMANCE REPORT

November 2009

PROGRAMME DELIVERY

Schedule Performance Index (SPI)

Year to-date	Year-end forecast
0.96	**1.00**

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

Cost Performance Index (CPI)

Year to-date	Year-end forecast
1.14	**1.08**

* 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
£1,814 k	**£4.767 million**

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

PRODUCTION

	November	2009 - 2010
Exempt waste removed from site:	**6.23** tonnes	**40.57** tonnes
Low-level waste processed for disposal:	**481** drums	**3,652** drums
Raffinate liquor converted to solid intermediate-level waste:	**37** drums	**414** 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: Compares injury and illness rates per 20,000 hours worked	**0.27**	
RIDDOR reportable occurrences:	**0**	**0**
Hours worked since last LTA:	**2,730,000**	
Average radiation dose to DSRL workforce:	**0.07** mSv	
Average radiation dose to non-DSRL workforce:	**0.06** mSv	

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

ENVIRONMENT

Events reported to regulator:	**0**	**0**
Amount of paper recycled:	**2,120** kg	**24,950** kg
Amount of metal recycled:	**41,080** kg	**89,280** kg
Amount of cardboard recycled:	**4,340** kg	**14,750** kg
Particles recovered from local beaches:	**6**	**22**

PEOPLE

Full time DSRL staff:	**972**
Part time DSRL staff:	**65**
Contractor staff:	**1,000**
Gate-held passes (infrequent users):	**131**

Dounreay is spending more than £7 million to overhaul the ventilation system that controls the emission of gaseous radioactivity during the decommissioning of redundant plants in the fuel cycle area. The new system is due to come on stream early in 2010.

An independent report published in November provided the public with reassurance about their exposure to radioactivity from Dounreay.

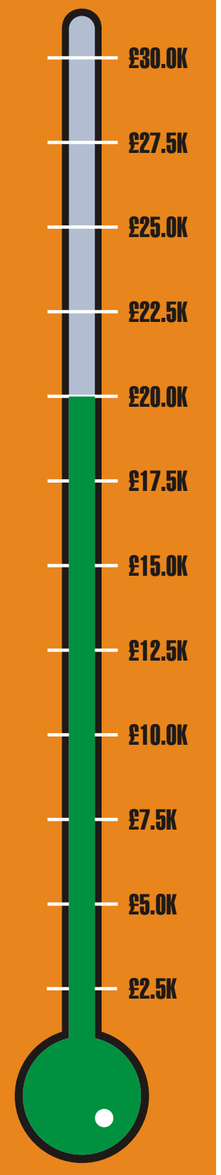
The report concluded that the total dose to the public during 2008 from Dounreay and other sources, including residual fall-out from nuclear weapons tests, amounted to eight per cent of the safe limit.

Details of the assessment are contained in Radioactivity in Food and the Environment 2008, published jointly by the Scottish Environment Protection Agency and the Food Standards Agency.

It is calculated by working out the habits of people living near Dounreay to provide a measure of their likely exposure to radioactivity measured in foodstuffs and the environment.

"We know that reducing the hazard here at Dounreay through decommissioning brings benefits to the area. This report provides reassurance that the impact of discharges from this work on the health and wellbeing of people living nearby is negligible," said **Doug Graham**, environmental team leader at Dounreay Site Restoration Ltd.

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



Total = £20,000

DFR
The number of batches of liquid metal destroyed from the coolant system of DFR reached 63. The plant is on course to reach it's year-end target of 75 early in March.

PFR
Removal of the hazardous asbestos and PVC cables from under the reactor floor continued to make excellent progress. The total length of cable removed in November was approximately 7km, bringing the total cable length removed so far this year to 18km.

DSRL tested an off-the-shelf camera to inspect the inside of the reactor to examine the residues of liquid metal coolant. An off-the-shelf system offers significant cost savings over those that are radiation-proofed and demonstrated its worth for two hours, sending back clear video footage before it failed. Other off-the-shelf units will now be used to examine other areas.

ENVIRONMENT
Monitoring for particles at Sandside resumed on November 11. Six "minor" particles were detected during the month.

Dounreay's draft heritage strategy was discussed with Historic Scotland, enabling the site to begin preparation for its publication in December when the public's views would be sought.

The annual Radioactivity in Food and the Environment report published by regulators concluded that the total dose during 2008 from Dounreay and other sources, including residual fall-out from nuclear weapons tests, amounted to eight per cent of the safe limit.

During the transfer of drums containing low-level waste from a store, contamination was detected on the exterior of a drum. This was wrapped pending completion of its processing as LLW for eventual disposal.

FUEL CYCLE AREA
The x-ray cell in one of Dounreay's redundant fuel cycle facilities, D1217, was stripped out, earning the decommissioning team a performance-based incentive.

SAFETY
Dounreay Site Restoration Ltd collected a "sword of honour" from the British Safety Council Sword of Honour at a ceremony in London's Goldsmith's Hall on November 27 It was one of only 40 handed each year to companies considered world class in their approach to health and safety.

The spotlight during November fell on electrical safety. It was the "topic of the month" for management and the site safety challenge has been set to complete 60 days without a non-compliance.

The annual review of safety with the Nuclear Installations Inspectorate of the Health and Safety Executive took place on November 25.

A container of solid radioactive waste was being moved inside a shielded flask from a waste sorting facility to a store when a survey showed higher-than-expected radiation levels being emitted from the flask before it left the building. A safety assessment was carried out and the contents returned safely to the waste cell. An investigation is being carried out.

DEMOLITION
Demolition started of a redundant building known as D6499, which previously covered part of the historic low-level waste pits.

SHAFT AND SILO
A bin-filling system was added to the mock-up at T3UK, Janetstown, of the process line for dealing with waste that will be retrieved from the shaft and silo. Work has commenced on installation of the sludge treatment system. The first trials are planned for January.

WASTE
Further meetings took place with Sellafield Ltd about the transfer of equipment that can be used in the proposed D3900 intermediate-level waste treatment plant and store.

OTHER
Employees of Dounreay Site Restoration Ltd were enrolled in the Combined Nuclear Pension Plan following the transition of the company from the public sector to the private sector.

In the first phase of changes to the senior management positions in the organisation, DSRL announced that Tom Cumming (AMEC) is being succeeded as head of commercial by John Gallagher (AMEC) and Andy Malkin (AMEC) will be replaced by Paul White (CH2M HILL).

Paul Barrett, head of corporate development at Babcock International Group, gave presentations to staff as part of a familiarisation visit following its acquisition of DSRL and parent body UKAEA Ltd.

Tony Fountain, the recently-appointed chief executive of the Nuclear Decommissioning Authority, made his first visit to Dounreay on November 26.

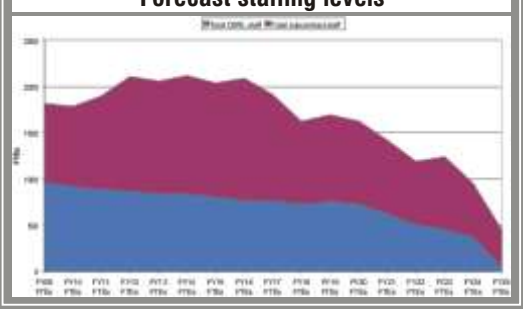
The site alert was sounded at 11am on November 11 to enable workers to observe a national silence on Remembrance Day.

DSRL hosted visits by journalists from the technical and mainstream media on November 4 & 5 on the eve of the 50th anniversary of criticality at DFR, Britain's first fast reactor.

More of Dounreay was opened up to public view with the publication of an on-line photo library, allowing any internet user to browse and download images of the site's decommissioning.

Site closure programme at-a-glance

Forecast staffing levels



Annual funding limits set by NDA

2009/10 (confirmed)	2010/11 (provisional)	2011/12 (provisional)
£156.7 million	**£154.8 million**	**£183.7 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	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 – 5 Feb 2010
- Main competition Industry day in Glasgow – 9 March 2010
- Contract Notice issued - Mid March 2010

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