

02/09 PERFORMANCE



Dounreay Site
Restoration Ltd

Site clean-up performance report for
February 2009

www.dounreay.com

Construction contracts at Dounreay

Dounreay is gearing up to begin construction work on three of the biggest projects needed to complete the site clean-up.

The major new plants will manage the bulk of the radioactive waste that will be generated during the remainder of the site decommissioning.

Construction of the first of the new plants – a treatment plant and store for intermediate-level waste – is scheduled to begin in 2010.

It will be followed in 2011 by the start of work on a new low-level waste disposal site and in 2013 by the start of building work to empty the shaft and silo.

The total cost of the three plants runs into hundreds of millions of pounds.

Outline planning consent has been granted for the new ILW facility and amended plans were lodged with the local authority in January.

Groundworks have been carried out in recent years to clear the land in the centre of the site.

Two local firms – Gunn and Miller – started work in February on groundworks for



the electrical sub-station and diversion of underground services.

At the shaft and silo, the first phases of decommissioning have been carried out. This involved hydraulic isolation of the shaft, removal of the cover building at the silo and installation of a new leak detection system.

Groundworks costing just

under £6 million will be carried to enable the construction of the waste retrieval and processing facilities to begin in 2013.

Trials of the remotely-operated equipment to be used in this process are taking place at the Janetstown test centre near Thurso.

At the eastern end of

Dounreay, investigations continue into the ground earmarked for the construction of vaults for the disposal of low-level radioactive waste.

DSRL will manage the projects but the construction work will be carried out by the supply chain. Firms were invited to attend a suppliers day on March 26 to discuss the programme.

1 9 2 months until shutdown



PROGRAMME PERFORMANCE REPORT

February 2009

PROGRAMME DELIVERY

Schedule Performance Index (SPI)

Year to-date	Year-end forecast
0.91	0.97

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

Cost Performance Index (CPI)

Year to-date	Year-end forecast
1.04	1.04

* 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	Year-end maximum forecast for project delivery
£3.08 million	£4.39 million

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

PRODUCTION

Exempt waste removed from site:

February	2008 - 2009
23 tonnes	140 tonnes

Low-level waste processed for disposal:

748 drums	4399 drums
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Raffinate liquor converted to solid intermediate-level waste:

73 drums	550 drums
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HEALTH & SAFETY

Number of reportable radiological events:

0	0
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Number of events on International Nuclear Event Scale:

0	0
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Average radiation dose (calendar year to date) to DSRL staff:

0.21 mSv

Maximum individual radiation dose (calendar year to date) to DSRL staff:

2.32 mSv

Average radiation dose (calendar year to date) to non-DSRL staff:

0.09 mSv

Maximum individual radiation dose (in calendar year to date) to non-DSRL staff:

2.29 mSv

Number of Lost Time Accidents:

1	4
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Total Recordable Incident Rate:

0.36

Compares injury and illness rates per 20,000 hours worked

RIDDOR reportable occurrences:

1	6
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Hours worked since last LTA:

100,000

ENVIRONMENT

Events reported to regulator:

0	0
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Radiological discharges as proportion of authorisation:

Reported quarterly on the website

Amount of paper recycled:

0 kg	10,740 kg
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Amount of metal recycled:

5,420 kg	95,410 kg
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Amount of cardboard recycled:

2,640 kg	8,820 kg
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Particles recovered from local beaches:

0

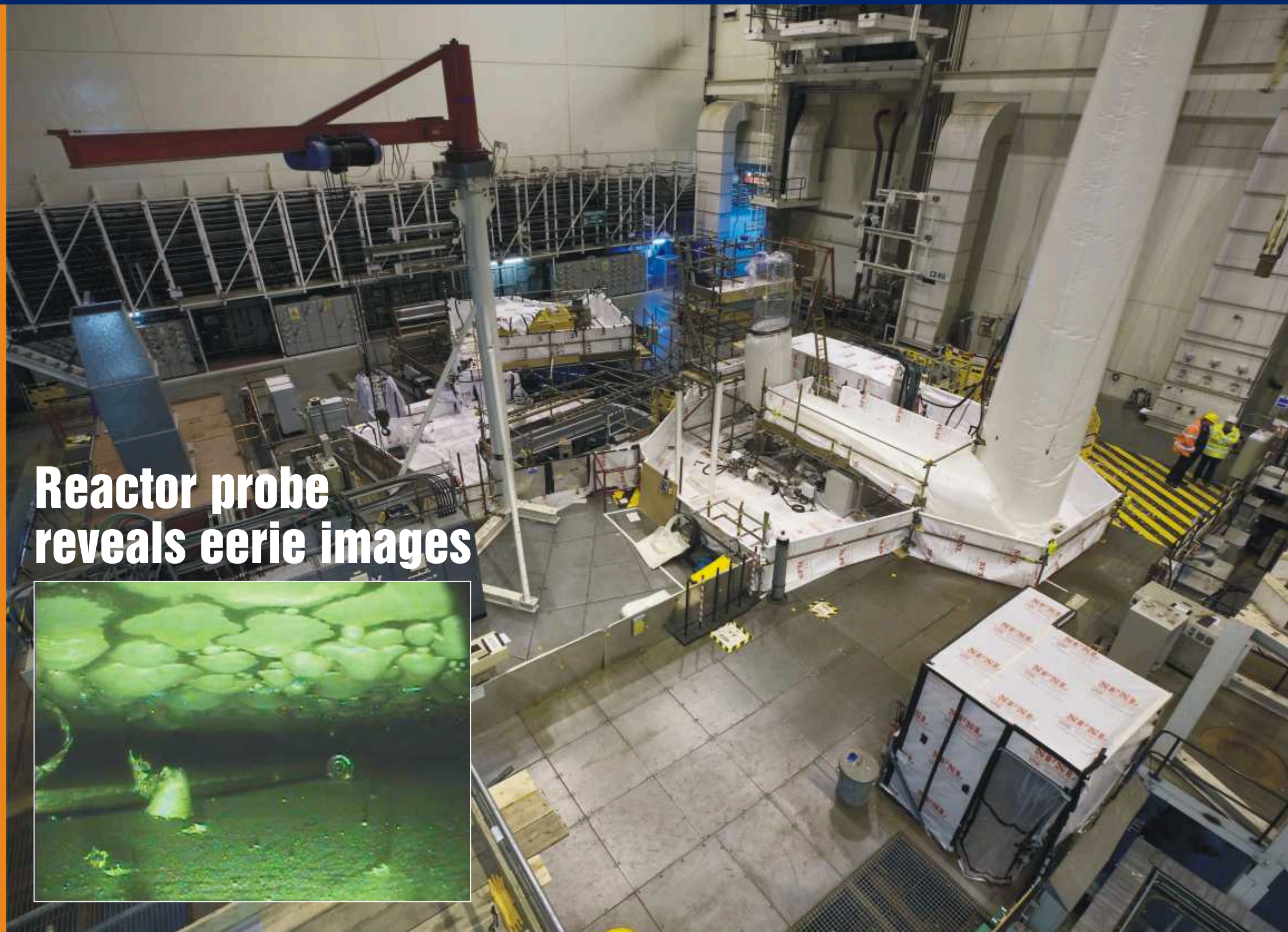
PEOPLE

DSRL (full time equivalents):

952.4

Sub-contractors (number of passes held):

1103



Reactor probe reveals eerie images



Designing devices that can drill down into the bowels of the PFR reactor and inspect the nooks and crannies that lie within is a task that DSRL's design team are well accomplished at. The latest invention has the combined ability to drill through the

reactor roof and capture photographic footage of the sodium deposits in an extreme environment of high radiation levels.

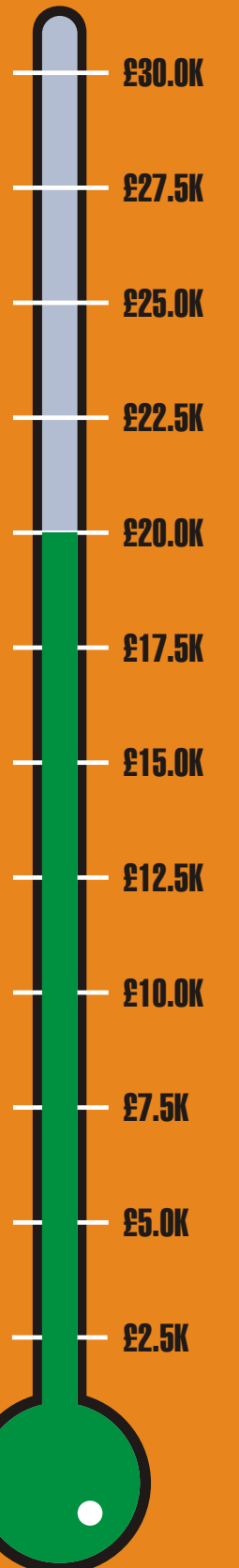
The specialised 6mm diameter exploratory endoscope camera, encased within a stainless steel

tube, was inserted over two metres down into the reactor. The camera has allowed the project team to retrieve images of the upper regions of the reactor where the thirty-one stainless steel insulation plates are located.

The eerie images, which resemble craters of the moon encrusted with volcanic lava, clearly show the historic build up of sodium residue on the metal plates that were once a crucial part of the reactor roof cooling process. The photos and radiation level readings

provide the decommissioning team with valuable knowledge and associated risk for planning the safe dismantling of the redundant plant.

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



Total = £17,500

DECOMMISSIONING

Dounreay Fast Reactor

The ion exchange plant that forms part of the liquid metal destruction process at Dounreay Fast Reactor restarted three weeks ahead of schedule. It had been closed for modifications last year after leaks during active commissioning. It was declared fit to restart on February 19 and regulatory agreement came on February 26.



Uranium recovery plant

Seventy drums of legacy waste were repacked, meeting a PBI target. The amber concrete plinth was removed.

Sodium

A by-pass was installed to overcome a blockage that had prevented sodium being transferred from the tank farm at PFR to the sodium destruction plant. The sodium inventory destruction facility is working ahead of schedule and completed its eighth load during February.

D2670

Removal of the fume cupboard was completed in the alpha lab of D2670. Work continued on removal of the ground floor section of glovebox in the pulsed column lab.

Reprocessing plants

Redundant equipment continued to be removed from the fast reactor reprocessing plant. Cell extract ventilation filters were replaced. Meanwhile, the north

cell bulge was completed in the research reactor fuel reprocessing plant. The north sample control panel strip-out and door fitting for entry to the MA cell is in progress.



D1217 PIE

Size reduction of south cell internals with plasma cutting continued in the post-irradiation examination facility. Preparations were made for north cell ventilation duct and loading bay glovebox removal.

Shaft

The preliminary post-closure environmental safety case for shaft isolation is almost complete. The isolation project was highly commended in the Ground Engineering technical awards 2009

Plutonium criticality cell

Following soft-strip of the building shell, demolition started on D8550 – the fourth and final cell of the experimental criticality laboratory.



Contaminated land

Dounreay's strategy for contaminated land was presented to NII, SEPA, NDA and Highland Council. Overall feedback was positive.

Effluent pipeline

A remotely-operated camera and radiation detection device penetrated the site's disused discharge lines 45 metres below the surface. Information gathered will inform a decommissioning plan for the pipes.

WASTE MANAGEMENT

D3900 ILW plant

DRSL has lodged amended plans with Highland Council for the major intermediate-level waste treatment plant and store known as D3900. The proposed development already has outline consent. The amendment combines two previous stores in a single facility. Meanwhile, Gunn and M.M. Miller carried out more groundwork in preparation for construction.

FCA ventilation

The new north stack was delivered into the Fuel Cycle Area as part of the ongoing installation of a new ventilation system.

PFR ventilation

A planning application has been lodged with Highland Council to replace the ventilation stack at PFR. Dounreay Site Restoration Ltd wants to install a new stack and ducts in support of its decommissioning.

Low level waste disposal

Highland Council submitted the decision of its planning committee to grant approval for a low-level waste disposal facility to Scottish Ministers for ratification. DSRL gave a presentation to the national low level waste strategy meeting in Edinburgh on February 26.

SAFETY AND ENVIRONMENT

Lost Time Accidents

A worker broke a finger when it became caught in a door.

Area	Days since last LTA
DFR Decommissioning	4,274
PFR Decommissioning	1,536
Site Decommissioning	109
ILW Projects	1,057
Site Services Unit	1
Waste Services Unit	2,731

Support files

Five environmental support files have been completed and approved by the site environment committee. Their production continues to be a high priority for the site

Security

Staff completed the latest site safety challenge – to complete 60 days without a breach of any security rules. This entitled workers to collect a free wind-up radio. Meanwhile, an emergency exercise was held on February 19 to test the site's security arrangements.

GENERAL

Laundry

Dounreay Site Restoration Ltd applied for planning permission to extend the inactive laundry. The proposed extension will be used primarily for washing respirators.

IT contractor

Dounreay's IT services are provided under contract by ISaT, part of the UKAEA group. DSRL was involved in discussions about the divestment of ISaT by UKAEA. Two bidders are on the short-list.

Decommissioning management

A PBI milestone for the amalgamation of the fast reactor decommissioning teams was completed six weeks ahead of schedule.

Spinout business

A project board has been established to oversee the spinout of businesses from DSRL as part of its contribution to the area's economic regeneration plan. The first meeting took place in February.

R & D report

DSRL published its technical baseline for research and development opportunities arising from the decommissioning programme.

Visitors

Visitors to site during February included John Malcolm of Historic Scotland, Marick Productions film team for the National Skills Academy – Nuclear, HM Inspectorate of Constabularies and Magnox North.