

05/09 PERFORMANCE



Dounreay Site
Restoration Ltd

Site clean-up performance report for
May 2009

www.dounreay.com

Waste project underway

More than a hundred people are working full-time to develop the biggest nuclear waste plant ever constructed in Scotland.

Over 80 people are working on the detailed design alone of the major facility to be built in the centre of the site.

The facility will take most of the solid and liquid intermediate-level waste from the rest of the site clean-up, mix it with cement in drums and boxes and transfer these packages to an adjoining store.

The waste is the most hazardous radioactive junk that needs to be managed at Dounreay, so all this will be done remotely behind thick shielding to protect workers from the radiation.

The bulk of the hazard is concentrated in 200m³ of acidic liquor from the historic reprocessing of spent nuclear fuel.

This will be piped from the current storage tanks to a chemical facility inside the new plant where it will be solidified inside drums with cement.

Current Scottish policy is to keep this type of waste where it was produced, eliminating the need to transport it long distances to a national facility. The store will have a design life of 100 years.

Planning permission was granted

in the spring by Highland Council and tendering is expected by March next year, with a construction contract awarded in late 2010.

With an expected cost in the region of £200m or so, the new plant is considerably cheaper than a previous solution for intermediate-level waste put forward a decade ago.

In the days prior to the Nuclear Decommissioning Authority, it was estimated that it would cost £600m to sort this type of waste.

Groundworks have already been carried out for the new plant and the whole project is due for completion in 2013.



1 8 9 months until shutdown



PROGRAMME PERFORMANCE REPORT

May 2009

PROGRAMME DELIVERY

Schedule Performance Index (SPI)

Year to-date	Year-end forecast
0.88	1.00

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

Cost Performance Index (CPI)

Year to-date	Year-end forecast
0.96	1.02

* 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
£0	£5 million

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

PRODUCTION

	May	2009 - 2010
Exempt waste removed from site:	2.5 tonnes	12 tonnes
Low-level waste processed for disposal:	209 drums	609 drums
Raffinate liquor converted to solid intermediate-level waste:	100 drums	123 drums

HEALTH & SAFETY

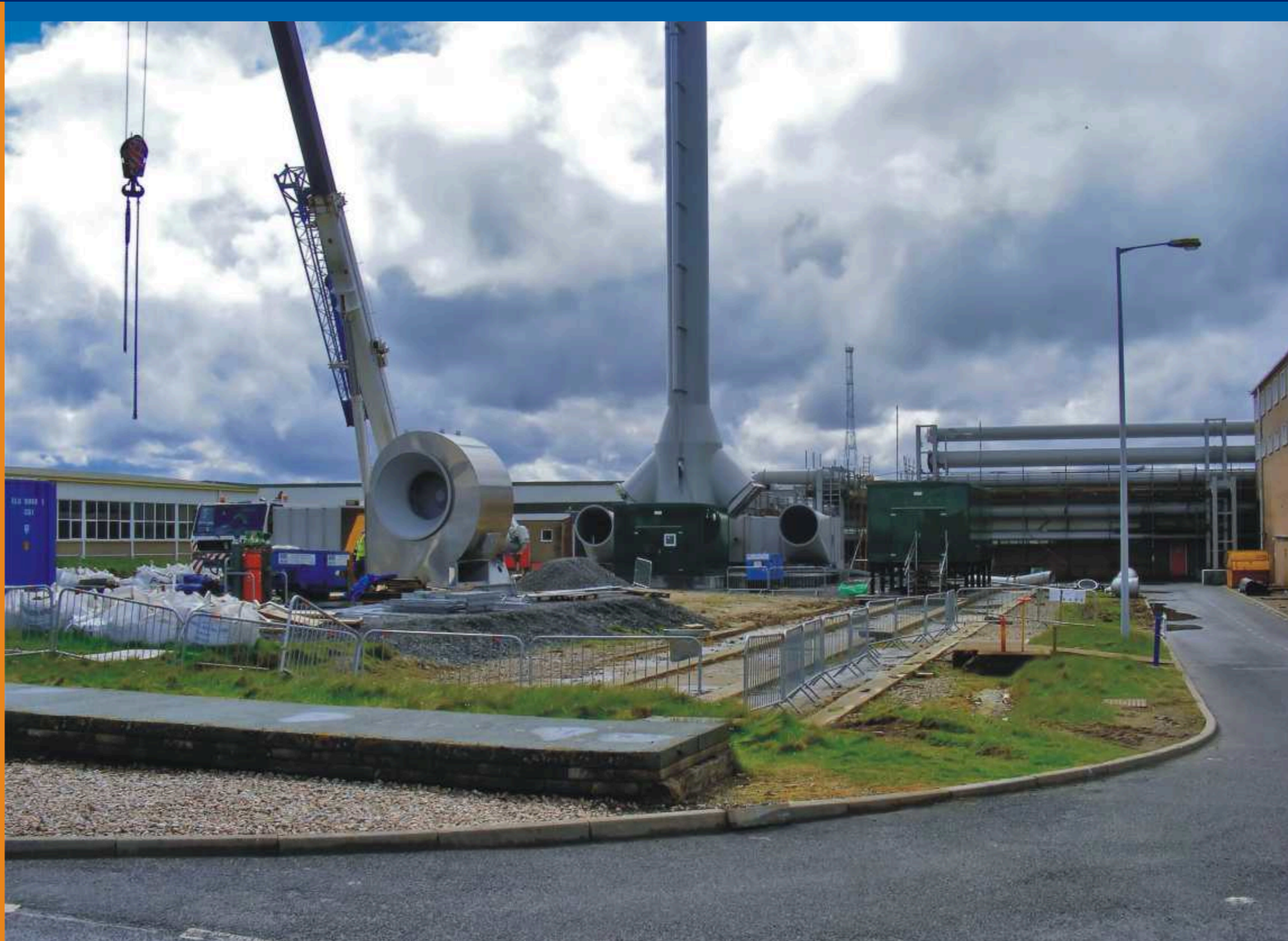
Number of reportable radiological events:	0	0
Number of events on International Nuclear Event Scale:	0	0
Number of Lost Time Accidents (LTA):	0	0
Total Recordable Incident Rate: <small>Compares injury and illness rates per 20,000 hours worked</small>	0.37	
RIDDOR reportable occurrences:	0	0
Hours worked since last LTA:	940,000	
Average radiation dose to DSRL workforce:	0.03 mSv	
Average radiation dose to non-DSRL workforce:	0.04 mSv	

ENVIRONMENT

Events reported to regulator:	0	0
Amount of paper recycled:	3,100 kg	3,100 kg
Amount of metal recycled:	15,400 kg	26,780 kg
Amount of cardboard recycled:	0 kg	0 kg
Particles recovered from local beaches:	1	1

PEOPLE

DSRL:	949.2
Sub-contractors:	1099



The modern ventilation system which will allow decommissioners to complete the clean-out and demolition of the plants in the Fuel Cycle Area is now more than 80 per cent complete.

Each of the dozen buildings that make up the heart of the Fuel Cycle Area has its own extract ventilation system with fans and ductwork, which extract contaminated air through filters and discharge it through the existing 55m high vent stack.

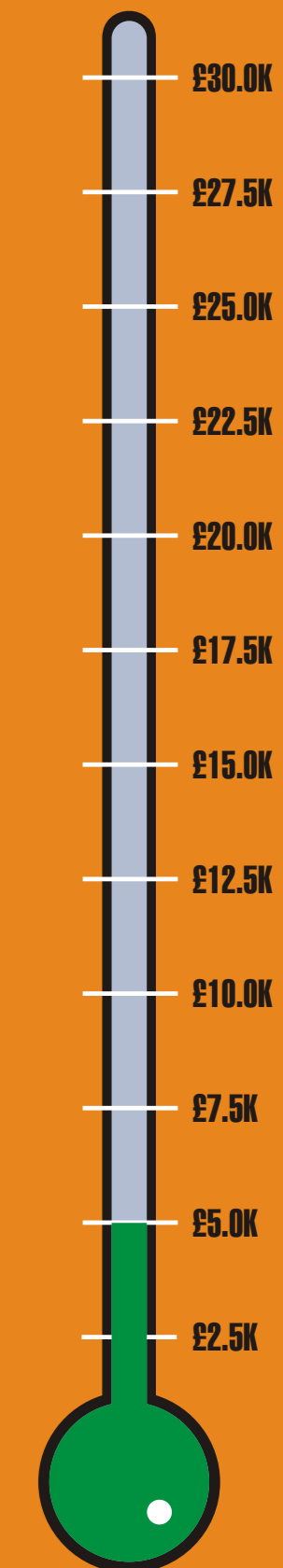
By next March, the existing stack will have been replaced by a new system comprising two 30m high vent stacks fed by four massive fans connected to the existing common ducts. The new system is able to cope with the need for decreasing ventilation as the facilities are gradually demolished over the coming years

The main contractor is JGC Engineering and Technical Services, with a team of about 40 people now working on the £7.4 million project.

Halifax Fans of West Yorkshire supplied the four fans which, at 8.5 tonnes each, were the largest nuclear specification fans ever built by the company.

Installation of the ventilation system is scheduled to be complete by the end of October 2009. This will be followed by a period of testing, with a target of the end of March 2010 to complete active commissioning.

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



Total = £5,000

DFR

Another five batches of liquid metal – the single biggest hazard on the site – were destroyed during May.

A radiation survey started in the latest phase of work to decommission the empty fuel pond.



FUEL CYCLE AREA

A further five bins were repacked in the uranium recovery plant and declassification progressed in the amber area.

The high active stirrer well dismantling was completed in the research reactor fuel reprocessing plant.

Work is underway to remove redundant equipment from the manipulator storage area of the fast reactor fuel reprocessing plant.

In the D1200 labs, the north face and half of the south face in Lab 77/78 cell line 1-8 have been

removed.

Decommissioning is taking place of the incinerator and laundry rooms at D1207.

FUEL

Work to remove the cladding from breeder elements stored at Dounreay reached the 50 per cent completion stage.

Discussions continued between NDA and Sellafield Sites Ltd about opportunities for the removal of redundant fuel from Dounreay.

ENVIRONMENT

A small radioactive particle was detected during a survey of the beach at Murkle. The first meeting of the independent Particles Retrieval Advisory Group was held.



A review is being carried out of the most appropriate way to deal with higher-than-expected levels of tritium from the clean-up of sodium-contaminated items at the SID plant. Work has been put on hold meantime.

Increased attention to energy costs resulted in year-on-year

reductions of 8.1 per cent in electricity and 8.6 per cent in heavy fuel oil during May.

HEALTH AND SAFETY

An emergency exercise involving all staff at Dounreay took place on May 13. The site effectively shut down for several hours. The exercise was deemed satisfactory by regulators.



DSRL hosted a workshop in Manchester on behalf of the NDA to share its experience in decommissioning plutonium facilities.

By the end of May, the site had recorded 950,00 man-hours, or 93 days, without a lost-time accident.

The clock was reset on May 20 on the latest Dounreay safety challenge – to go 60 days without a breach of fire regulations. The challenge has identified non-compliance in areas such as keeping fire exits clear.

GENERAL

CSC, which purchased the IT division of UKAEA Ltd, officially became the IT contractor to .

DSRL on May 1.

The PFR and DFR teams were amalgamated on May 18 to form the reactors decommissioning project.

Decommissioning Dounreay is one of three major areas of work identified by Highland Council in its latest development plan scheme.

North Highland College and the Open University were among bodies who took part in the national Learning at Work Day at Dounreay on May 14.

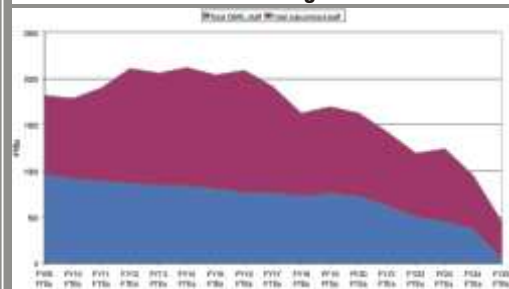
Representatives from 45 companies who took part in the annual Nu Tech trade exhibition at Dounreay on May 21 were urged by Simon Middlemas, DSRL managing director, to seize the opportunities offered by decommissioning Dounreay.



Visitors during May include the NDA competition team, David Luxton of Prospect, Gary Smith and Harry Donaldson of GMB, the Welding Institute, David Stewart MSP, BAe Systems, the deputy editor of Nuclear Engineering International, a freelance journalist and a writer and photographer from Huck surfing magazine.

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	Interim End State - £3.2 bn

NDA competition for DSRL

- Industry day for bidders – December 2009
- Tendering – October 2010
- Preferred bidder – April 2011
- New company takes over DSRL – September 2011

