

# 10/08 PERFORMANCE



Dounreay Site  
Restoration Ltd

Site clean-up performance report for  
**October 2008**

[www.dounreay.com](http://www.dounreay.com)

## Fuel crushing plant dismantled

Another legacy of Dounreay's commercial fuel-reprocessing past has now been dismantled.

During the 1990s, UKAEA's commercial fuel reprocessing arm won a contract to recover highly enriched uranium and thorium from 70 tonnes of unirradiated graphite fuel spheres received from Germany.

The contract required the construction of specialised plant at Dounreay. An entire process line was built, including a furnace, a glovebox for solvent extraction, evaporator, and storage tanks.

Now the glovebox used to crush the graphite-coated spheres is the first part of the separation process line to be taken apart.

A team of workers from DSRL, Doosan Babcock and Nuvia began the work by wiping down and swabbing all internal equipment and surfaces of the glovebox that could be reached from the installed glove ports.

This was an essential first step to minimise the loose graphite still in the glovebox before dismantling commenced.

A very large temporary containment was constructed around the glovebox and then workers in protective air-fed suits removed one glovebox panel at a time, using industrial steel cutting tools. The contents and equipment from the glovebox were consigned as low level waste. Finally, the steelwork was cut up into 'flat pack' sections and also consigned as low level waste.

Project Manager David Manson commented, "The radioactive graphite dust remaining in the glovebox was challenging to remove, and required careful and laborious work to ensure that the interior of the glovebox was as clean as possible."



**197** months until shutdown



# PROGRAMME PERFORMANCE REPORT

September 2008

## PROGRAMME DELIVERY

### Schedule Performance Index (SPI)

Year to-date	Year-end forecast
<b>0.87</b>	<b>0.98</b>

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

### Cost Performance Index (CPI)

Year to-date	Year-end forecast
<b>1.03</b>	<b>1.00</b>

\* 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
<b>£1,174k</b>	<b>£3.98 million</b>

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

## PRODUCTION

	October	2008 - 2009
Exempt waste removed from site:	<b>0</b> tonnes	<b>103</b> tonnes
Low-level waste processed for disposal:	<b>318</b> drums	<b>2468</b> drums
Raffinate liquor converted to solid intermediate-level waste:	<b>72</b> drums	<b>285</b> drums

## HEALTH & SAFETY

Number of reportable radiological events:	<b>0</b>	<b>0</b>
Number of events on International Nuclear Event Scale:	<b>0</b>	<b>0</b>
Average radiation dose (calendar year to date) to DSRL staff:	<b>0.09</b> mSv	
Maximum individual radiation dose (calendar year to date) to DSRL staff:	<b>1.93</b> mSv	
Average radiation dose (calendar year to date) to non-DSRL staff:	<b>0.07</b> mSv	
Maximum individual radiation dose (in calendar year to date) to non-DSRL staff:	<b>1.77</b> mSv	
Number of Lost Time Accidents:	<b>0</b>	<b>1</b>
Total Recordable Incident Rate: <small>Compares injury and illness rates per 20,000 hours worked</small>	<b>0.15</b>	
RIDDOR reportable occurrences:	<b>0</b>	
Hours worked since last LTA:	<b>1.15</b> m	

## ENVIRONMENT

Events reported to regulator:	<b>0</b>	<b>0</b>
Radiological discharges as proportion of authorisation:	Reported quarterly on the website	
Amount of paper recycled:	<b>10,740</b> kg	
Amount of metal recycled:	<b>48,700</b> kg	
Amount of cardboard recycled:	<b>3,640</b> kg	
Particles recovered from local beaches:	<b>0</b>	

## PEOPLE

DSRL (full time equivalents):	<b>946.80</b>
Sub-contractors (number of passes held):	<b>1149</b>



The removal of the ventilation stack at the plutonium research laboratory heralds the beginning of the end for the building. Workers inside the building cut

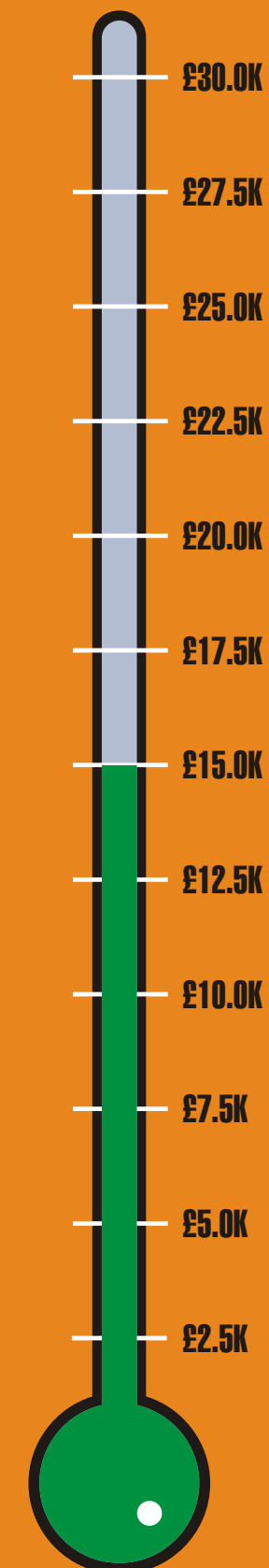
through the base of the galvanised steel stack while a crane outside held it steady. It was then lifted out and placed on a lorry, which transported it to a contained area where it

will be cut into two pieces and consigned as low level waste. The decommissioning team of workers from DSRL, Doosan Babcock, Nukem and NDSL have been

working since 2000 to empty and clean out the facility, which was heavily contaminated. They made many thousands of 'entries' into the building in protective clothing and

breathing apparatus, to carry out heavy industrial work. Now it has been completely cleaned up, it will shortly be demolished.

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



**Total = £15,000**

## SITE NEWS

### Safety

The site met the 30-day safe driving safety challenge on Saturday 4 October at 1600hrs. A cheque for £6,000 will be presented to Macmillan Cancer Support. A new safety challenge relating to security begins on 1 December.

On 18 October the site once again achieved the target of 1 million working hours without a Lost Time Accident.

DSRL's management contractor, Johnson Controls, achieved three years without Lost Time Accident at midnight on Tuesday 30 September, 2008.



### French engineers on site

French commissioning engineers have been on site during October to assist with the inactive commissioning of the breeder removal building, which will remove the remaining breeder from the Dounreay fast reactor and package it for safe storage.



### Foundations poured

During October, over 350 tons of concrete have been poured in the FCA ventilation project, to form the foundations for the north and south stacks, and 11 foundation bases



### Seabed clean-up video released

A total of 55 particles were recovered from the seabed during a demonstration phase of the offshore clean-up. A 10-minute video showing recovery of a particle, including footage from the remotely-operated vehicle on the seabed, has been released by DSRL and contractor Fathoms Ltd. It can be viewed at <http://www.dounreay.com/news-room/video-library>



### First fuel pond decommissioned

The fuel pond which served the Dounreay materials test reactor has now been completely cleaned out, following completion of the concrete removal. The pond is the first to be completely decommissioned at Dounreay.



### Update on the FCA nose blow investigations

Dose investigations have been undertaken following the previously reported identification of elevated levels of activity on routine nose-blow samples. Eight out of twelve of the nose-blow dose investigations have now been completed and for each a dose of zero has been reported. The results for the remaining four personnel should be completed in the near future, but early indications are that the results will be similar to those already reported.

### Castlegate seep investigated

The internal investigation into potentially elevated activity levels recorded in water from the Castlegate seep indicated the activity in the water had not increased, but that the elevated levels detected were due to the presence of sediment in the sample.

### Drain refurbishment

The low active drain refurbishment project is progressing well, despite disruption from the weather. The project will ensure that the drainage system is capable of supporting the decommissioning

programme for the remainder of its duration.

### WRACS

The planned maintenance shutdown at WRACS has been completed. The plant is now processing the backlog of drums.



### Blood donors

The Blood Transfusion Service visited site for two days, allowing staff to donate much needed blood. A total of 190 units was collected.

### Visits

During October, the site hosted the following visits:

- A fact finding tour by the Malaysian Atomic Energy Licensing Board (facilitated by SEPA).
- The UKAEA Board Assurance Committee.
- A fact finding tour by four Kazakhstan nationals, supported by UKAEA Ltd and Nuvia Ltd.
- The Highland Council.