

# 08/08 PERFORMANCE



Dounreay Site  
Restoration Ltd

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

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

## SEA BED CLEAN UP BEGINS

Work has started to clear particles from the seabed near Dounreay.

Independent experts estimate there may be 1500 fragments buried in the sediment close to the site's old discharge outlet that are a significant hazard to public health. The disintegration of these fragments is believed to contribute to the number of smaller, less hazardous particles found on local beaches.

The start of work to recover these fragments from the seabed follows several years of research and the largest public consultation in Dounreay's history.

Wick-based offshore contractor Fathoms Ltd won the contract following a competitive tendering exercise and offshore trials.

Fathoms is deploying a remotely-operated vehicle that can detect and retrieve particles buried up to



50cm deep. The ROV is controlled from a surface vessel where recovered particles are separated from the sediment and packaged for return to Dounreay.

Weather conditions effectively limit the period of operation to May-September each year.

The clean-up is targeted at an area of seabed measuring 60 hectares – equal to 60 or so football pitches in the vicinity of a fisheries exclusion zone imposed over a 2km radius from the old seabed discharge outlet.

Monitoring of local beaches is continuing during the clean-up.

Special attention is being paid to any change in the frequency of onshore finds. Disturbance of the seabed means a short-term increase in beach finds close to Dounreay cannot be ruled out.

Phil Cartwright, particles clean-up project manager, said: "The public consultation process recognised that recovery of every particle, irrespective of risk, was impractical but did find support for retrieval of those particles that pose a significant risk to health.

"That is the option we are now putting into action. We expect to detect a number of smaller, less radioactive particles as well and

these will also be retrieved.

"We have worked very closely with independent experts in the Dounreay Particles Advisory Group, the Scottish Environment Protection Agency and many others, including affected land-owners, to reach the stage where we can clean up the seabed in a way that is environmentally and publicly acceptable. I would like to thank them for their co-operation."

The estimated cost of the clean-up and continued beach monitoring until the early 2020s is £18-25 million.

**199** months until shutdown



# PROGRAMME PERFORMANCE REPORT

August 2008

## PROGRAMME DELIVERY

### Schedule Performance Index (SPI)

|              |                   |
|--------------|-------------------|
| Year to-date | Year-end forecast |
| <b>0.92</b>  | <b>0.99</b>       |

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

### Cost Performance Index (CPI)

|              |                   |
|--------------|-------------------|
| Year to-date | Year-end forecast |
| <b>0.99</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>£733k</b> | <b>£4.35 million</b>                           |

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

## PRODUCTION

|   | August           | 2008 - 2009       |
|---|------------------|-------------------|
| Exempt waste removed from site:                               | <b>0</b> kg      | <b>212</b> kg     |
| Low-level waste processed for disposal:                       | <b>371</b> drums | <b>1725</b> drums |
| Raffinate liquor converted to solid intermediate-level waste: | <b>30</b> drums  | <b>140</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>0.08</b> mSv |          |
| Maximum individual radiation dose (calendar year to date) to DSRL staff:                                    | <b>1.72</b> mSv |          |
| Average radiation dose (calendar year to date) to non-DSRL staff:   | <b>1.00</b> mSv |          |
| Maximum individual radiation dose (in calendar year to date) to non-DSRL staff:                             | <b>1.40</b> mSv |          |
| Number of Lost Time Accidents:  | <b>0</b>        |          |
| Total Recordable Incident Rate:<br><small>Compares injury and illness rates per 20,000 hours worked</small> | <b>0.20</b>     |          |
| RIDDOR reportable occurrences:  | <b>0</b>        |          |
| Hours worked since last LTA:  | <b>481,264</b>  |          |

## 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>0</b> kg                       |          |
| Amount of metal recycled:                               | <b>0</b> kg                       |          |
| Amount of cardboard recycled:                           | <b>0</b> kg                       |          |
| Particles recovered from local beaches:                 | <b>0</b> (Cumulative 114)         |          |

## PEOPLE

|  |              |
|--|--------------|
| DSRL (full time equivalents):            | <b>941.1</b> |
| Sub-contractors (number of passes held): | <b>1179</b>  |



A hundred people have found work on the largest manufacturing job ever undertaken in the Highlands for Dounreay.

They are turning more than 300 tonnes of steel into a network of ducts and chambers that will form the ventilation system needed to decommission more than a

dozen of the most hazardous facilities at the site.

Steel plates delivered from Corus at Sheffield are being rolled at JGC sites at Harpsdale and Janetstown, Caithness, and welded into shape.

The finished parts are due to begin arriving at Dounreay in

October, with up to 150 lorry-loads expected by the end of the year.

It is expected to take another nine months to install the fans, electrical infrastructure, supports, ducts, chambers and two 30m-high stacks. The contract is worth £7.4 million.

The new system will extract

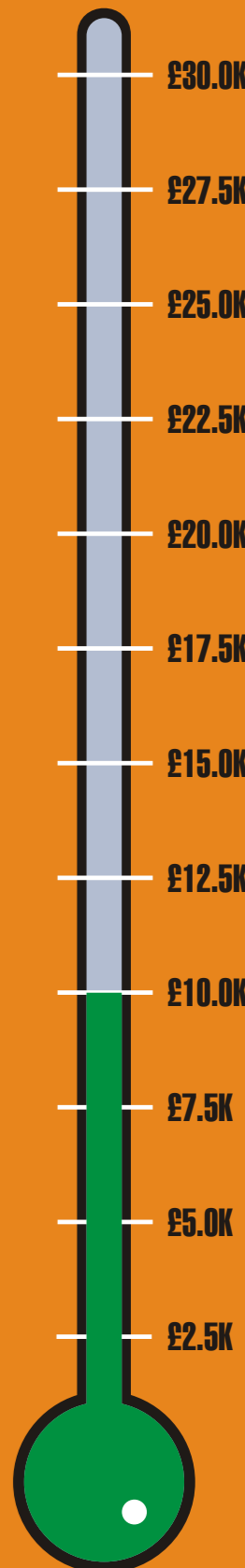
filtered air from some of the most hazardous facilities in the Fuel Cycle Area – the complex of buildings that includes old reprocessing plants, chemical works, waste and fuel stores.

“The engineers who designed the ventilation system in the 1950s were more concerned with the operation of these

facilities than their decommissioning,” explained project manager Iain Lyall.

“Decommissioning old fuel and waste plants to today’s standards needs a modern ventilation system that will give greater protection to both the workforce and the environment.”

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



**Total = £10,000**

**CEMENTATION PLANT**

The cementation plant resumed operations following the quarterly shut down for routine maintenance.

**SODIUM INVENTORY DISPOSAL**

The first load of components coated with the liquid metal sodium-potassium was successfully cleaned up in the sodium inventory disposal plant at PFR.

**LOW-LEVEL WASTE**

The low-level waste management facility WRACS resumed supercompaction operations following a maintenance shutdown.



**DFR SODIUM RESIDUE**

A contract was awarded to Scott Wilson Ltd for the concept design for removal of the sodium-potassium residues at Dounreay Fast Reactor.

**SHAFT ISOLATION**

Groundwater monitoring is showing a reduction by a factor of five in the volume of water following successful isolation of the shaft.

**DMTR FUEL POND**

Concrete decontamination and removal reached the halfway stage in decommissioning of the DMTR fuel pond.

**REPROCESSING PLANT ENTRY**

The cell access structure and penetrations were installed in preparation for entry to the cell area of the former MTR fuel reprocessing plant.

**LLW GROUNDWATER SAMPLING**

The fifth round of groundwater sampling was carried out in support of the proposed LLW disposal facility.

**DFR CRANE**

The polar crane inside the dome of the Dounreay Fast Reactor came back into service after repairs.



**BREEDER DECLADDING**

Work continued to remove the cladding from old breeder material in the Fuel Cycle Area, with the sixth container successfully completed.

**FUEL CYCLE AREA**

Decommissioning has been temporarily suspended in a plant after routine noseblows indicated elevated levels of radioactivity. The source is currently being investigated.

**PIE DISMANTLING**

Plasma cutting continued in the north cell of the post-irradiation examination facility and preparations made for a radiological and camera survey of the in-cell vent duct.

**D1200 LABS**

Wall shielding was removed from cell 12 in lab 77/78. Clean-out of cell line 1-8 continued.



**D1207 CHANGEROOM**

The change-room, breathing air and ventilation systems were installed to support decommissioning of the D1207 low-level waste treatment facility.

**DSRL PAY REMIT**

Representatives of DSRL Management and the three trades unions met on August 26 for initial discussions on the 2008 pay review. A remit to negotiate has since been received by DSRL management from Government, which allowed formal negotiations to proceed.

**1000TH APPRENTICE QUALIFIES**

The 1000th engineering apprentice to be taken on at Dounreay has successfully completed his apprenticeship. Electrician Gary Davidson (22) was one of the 2004 intake of apprentices who received their "ticket" at the annual indenture ceremony at the Pentland Hotel.



**DOUNREAY SUPPLIERS DAY A GREAT SUCCESS**

More than 100 delegates attended a suppliers day event in Thurso on August 20. About 70-80 percent of the site's annual spend is with the supply chain.

**LANDFILL**

The preliminary report from an independent body has confirmed that the risk of asbestos inhalation at Dounreay's Landfill Site is low. The report was commissioned following concerns amongst workers carrying out a survey. Never the less, Dounreay has improved its procedures for highlighting the

presence of asbestos in the landfill area.

**'EXERCISE FOXTROT'**

There was a successful demonstration of the Highland & Islands Fire & Rescue Service's emergency plan for Dounreay, with both HIFRS and the Dounreay fire brigade taking part in an exercise on site on August 28.



**ASSESSMENT TRIAL**

DSRL has agreed to a request from SEPA to participate in a trial of a new performance rating system to replace the operator performance assessment scheme. It is intended that the new methodology will place a greater emphasis on environmental performance;

**EMERGENCY PLANNING**

Following regulatory approval of revised emergency arrangements under the REPIR regulations, work is underway to formalise these changes in the emergency plan.

**DEMOLITION ON INTERNET**

A short film about the successful decommissioning and demolition of the fuel fabrication plant is being screened on the dounreay.com website.

**ENERGY SAVINGS**

The area energy co-ordinators meeting has been revived in an attempt to reduce energy costs at the site.

**VISITS**

In August, Dounreay hosted visits from:

- John Thurso MP
- UKAEA board
- John Park MSP
- Rear Admiral Andrew Matthews, Director General Nuclear, Royal Navy