



**Dounreay Site Restoration Limited (DSRL)**

**FY 2010/11  
Dounreay Stakeholder Group  
Site Restoration Sub-Group  
October 2010**

# **1. Safety Performance**

## **Safety Performance/Issues**

DSRL continues to deliver the decommissioning and high hazard reduction programme to schedule and cost. Safety, Environmental and Security performance remains positive. There have been no lost time accidents since the previous meeting and the site has returned a Total Recordable Injury Rate (TRIR) of 0.27 and a Days Away Case Rate of 0.16, as at 30 Sept 2010. This remains within the NDA "green" range.

On 27th August 2010 DSRL completed its site based safety challenge which focused on the identification and promotion of good safety practice. Over 60 suggestions for improvements were received from staff and contractors and these are now being implemented across site.

As has previously been reported, NII has undertaken an investigation into an event which occurred in late 2009 where two redundant Californium 252 Sources were transferred in a flask without the correct controls in place. While the dose levels did not exceed the legal or lower site-imposed maximum dose levels, the levels were nevertheless above those planned for this task. NII has completed their initial investigation, and has since decided that it is necessary to obtain further information and it expected that they will return to site in November 2010 to undertake further interviews. All actions from the DSRL and initial NII investigation into this incident have been completed.

## **Emergency Arrangements**

In September 2010 DSRL successfully completed exercise Delta 46 where the site demonstrated the adequacy of its Off-Site Emergency Plan. It also tested the multi-agencies and national response to a civil nuclear emergency in Scotland. The Strategic Coordinating Centre was setup at the Northern Constabulary Headquarters, as well as the Media Briefing Centre in Inverness and a Forward Media Information Point in Thurso. The Regulators deemed the exercise a sufficient test of the arrangements under the requirements of REPPiR.

## **Security Issues**

There have been no security issues since the previous meeting.

# **2. Environmental Performance**

## **Discharges**

All discharges since the previous meeting were within the sites authorised limits and there have been no environmental incidents.

## **Fuel Cycle Area Ventilation**

The project to upgrade the ventilation system in the Fuel Cycle Area has been successfully completed. Two new stacks and several hundred metres of new ductwork have been installed to replace the original system which dated back to 1950s, and the change-over to the new system was done in early Oct 2010. It is pleasing to note that almost all of the work on this project was done by local contractors and it was completed to time and within budget.

## Particles

The offshore particle monitoring and removal project completed the manufacture and deployment of the Remotely Operated Vehicle (ROV) in July 2010. Advantage of calm weather was taken to extend the operational window into October, and as a result 28% more of the seabed was monitored this year than was originally planned. A total of 429 particles were successfully recovered during this years campaign. The results are now being analysed and will be presented to the Particles Recovery Advisory Group (PRAG) later this year.

Access to Sandside beach for beach monitoring was restored at the end of Sept 2010.

## 3. Operational Performance

Decommissioning in support of the hazard reduction mission continues to progress well; performance remains steady with an in year schedule performance index (SPI) of 1.00.

### Reactor Decommissioning

Forty one batches of primary NaK have been fully processed through the DFR NaK Disposal Plant in this quarter. This brings the overall total number of primary batches up to 181, which means that over 50% of the total DFR NaK inventory has now been safely destroyed. Taking into account planned outages, this is ahead of schedule for the year.

Twenty six Mixer/Breeder Spent Fuel Cans have been removed from the PFR Irradiated Fuel Pond and transferred to PFR Irradiated Fuel Caves (IFC) in the year to date, which is ahead of schedule. The IFC is preparing to begin a maintenance outage which has historically raised varied technical challenges but is expected to be completed in early 2011.

The draining and treatment of radioactive liquor that has been stored in the PFR Temporary Storage Vessel since the reactor closed was completed in Sept 2010. This utilised PFRs modern Effluent Treatment Plant which employs ion-exchange technology to remove contamination from the liquor.

The Sodium Inventory Destruction Facility has processed a total of 8 loads of sodium-contaminated waste this year and operations are currently ahead of schedule.

711m<sup>3</sup> of water was now been treated and discharged from the DFR ponds, which represents approximately half of the pond inventory. The next stage of work is to remove sludge from the pond and decontaminate the pond walls.

### Fuel Cycle Area Decommissioning

The Dounreay Cementation Plant (**DCP**) had an outage in the 1st quarter of 2010/11 and has since returned to steady operations processing 44.6m<sup>3</sup> of Material Test Reactor (MTR) in year to date producing 239 drums of conditioned product. This is slightly behind schedule for meeting the upper target of 100m<sup>3</sup>.

The D1204 Material Test Reactor reprocessing plant decommissioning team completed removal of the high active cell transfer bulge.

The D1206 oxide reprocessing plant decommissioning team continued refurbishment of building services and rationalisation of the building ventilation system. Repairs to the Active Filter Change Robot were completed.

D1217 PIE facility decommissioning continues. Repairs to the building crane were completed and ILW removal restarted. Redundant ventilation system removal is in progress. In cell LLW removal continues to prepare for installation of scabbling equipment.

The D2001 team has completed decladding the 22<sup>nd</sup> of 24 DFR breeder fuel drums.

D1207 decontamination plant decommissioning is continuing. The south roof annex strip out work has been completed with the north roof annex strip out continuing. This task has proved to be more difficult than expected as a result of the finding of significant amounts of asbestos.

## **Waste Management**

The final 21 drums were removed from the D1251 Drum store during the quarter, this included resolving the problems encountered with last 3 D9875 drums which were stuck behind a bent locating pole. The drum store is now available to begin removal of internal drum store furniture.

A project to place a cap over the former LLW Pit complex has been completed. This is expected to reduce the amount of rain water that soaks through into the pits, which will in turn reduce discharges of contaminated effluent from the site.

Work to put in the infrastructure for the new LLW Disposal Facility has commenced. Off-site trials were held in September to determine whether the use of explosive charges to excavate the vaults would offer environmental benefits over conventional excavation techniques. These trials showed that the use of explosives was less noisy and dusty than the alternatives as well as reducing construction time.

## **Fuels**

A shipment of United States obligated Unirradiated Highly Enriched Uranium material has been returned to the USA.

## **4. Contractual Obligations**

Joe Kane has been seconded to DSRL from CH2MHill to become the Commercial Services Manager, replacing Ian Caine who has now retired.

The site is continuing to look for areas where savings can be made in support and overhead costs to meet the NDAs target of achieving a 5% reduction in these costs during 2010/11.

## **5. PBO Competition**

The NDA programme to compete management of the DSRL Parent Body Organisation has continued as planned. DSRL has updated the Dounreay Lifetime Plan (LTP) to match the funding profile £150m per annum and this is now being reviewed by the NDA. Teams from the two bidders for the competition (Babcock Dounreay Partnership and Caithness Solutions) are being given informal access to the site to enable them to acquire information that they need to compile their bids. It is expected that NDA will shortly issue their formal "Invitation to Tender" document.

## 6. Site Statistics – at a glance

(as of 30<sup>th</sup> September 2010)

### PROGRAMME DELIVERY

#### Schedule performance index (SPI)

Year to date	Year-end forecast
0.99	1.12

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

### COST PERFORMANCE INDEX (CPI)

Year to date	Year-end forecast
1.00	1.00

\* CPI measures the cost of work actually carried out against the forecast agreed with the NDA. A figure of 1.0 equals the cost agree; greater than 1.00 reflects efficiency gains.

### PROGRAMME BASED INCENTIVES (PBI)

Year to date earned	Year-end maximum forecast for project delivery
£1,200K	£5,59 Million

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

### PRODUCTION

	September	2010 – 2011
Bags of clean/exempt waste for clearance monitoring	0 bags	272 bags
Low-level waste processed for disposal	493 drums	2,456 drums
Raffinate liquor converted to solid intermediate waste	65 drums	255 drums

### HEALTH AND SAFETY

	September	2010 – 2011
Number of reportable radiological events:	0	0
Number of events on International Nuclear Event Scale:	0	2
Number of Lost Time Accidents (LTA)	0	1
Total Recordable Incident Rate Compare injury and illness rates per 20,000 hours worked	0.27	
RIDDOR reportable occurrences	0	1
Hours worked since last LTA	1.06 million	
Average individual radiation dose (DSRL)	0.02 mSv	
Average individual radiation dose (non-DSRL)	0,02 mSv	

### ENVIRONMENT

	September	2010 – 2011
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Events reported to regulator	0	0
Amount of paper recycled	0 kg	8080 kg
Amount of metal recycled	0 kg	10,300 kg
Amount of cardboard recycled	0 kg	4600 kg
Particles recovered from local beaches	0	5

## PEOPLE

	September
Full time DSRL staff	853
Part time DSRL staff	69
Contractor staff	901
Gate-held passes (infrequent use)	152

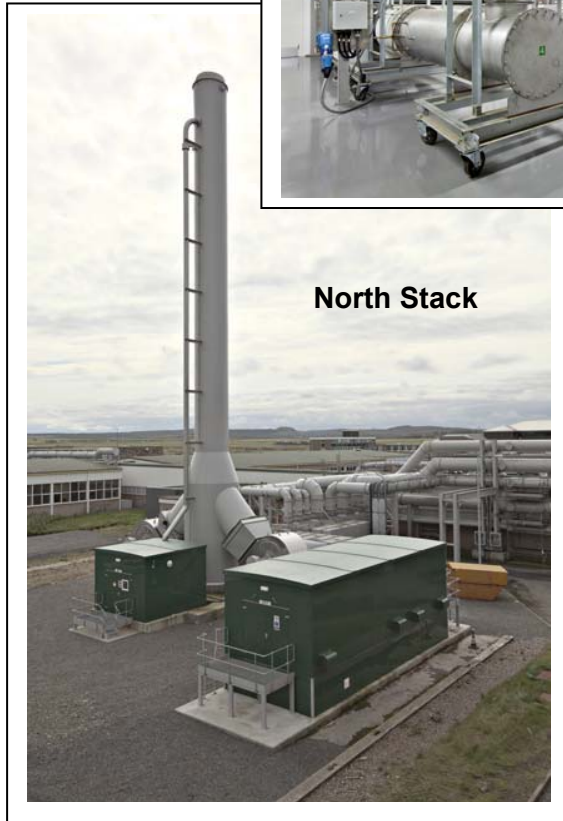
Dounreay Site Restoration Ltd  
1<sup>st</sup> November 2010

**PROGRESS PHOTOGRAPHS FROM THE LAST QUARTER**

**D1209 Underground Duct Extract Facility**



**D1209 FCA Replacement Ventilation Project systems - now providing FCA Facility ventilation extract.**



**North Stack**



**South Stack**



**D1203 UO3 Line Decommissioning**