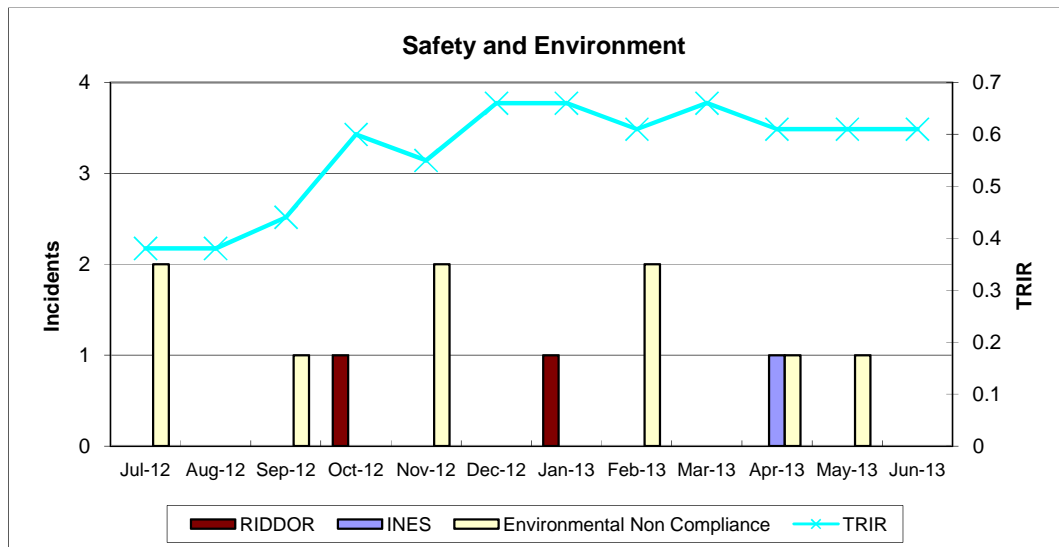


# Dounreay Report

## Progress report up to end June 2013

### Health, Safety, Security and Environmental Performance



- Safety performance continues to be monitored. Feedback from the safety culture assessment has been reviewed and an action plan has been prepared. A series of briefings were presented to the site identifying three initiatives and DSRL personnel are participating.
- There were no RIDDOR reportable incidents in June 2013.
- The DACR and TRIR remained the same at 0.50 and 0.61 respectively.
- The highest radiation doses for DSRL and Contractor personnel (up to end of May) were 0.69 mSv and 1.10 mSv respectively. These are in line with expectations.
- Euratom delivered the Annual Review of Safeguards performance. No observations were made following the inspection during 2012 and Euratom concluded that "The operators system and inspection/measurement regime implemented can be considered as satisfactory".
- The reduction of hand injuries across site is the new Safety Challenge. The workforce has been challenged to complete 60 days without a hand injury requiring treatment and to identify 20 improvements or good practices to reduce hand injuries.
- Dounreay hosted a visit from the BP Safety Reps in June as part of the BP Safety forum conference that takes place quarterly. They carried out safety inspections in PFR, DFR and the main workshops to identify good practices and areas that could be improved. They commented on the superb knowledge of the escort staff, the warm open welcome they received from the site and the openness and approachability of the workforce as they

conducted their inspections and asked questions. Some areas of improvement were identified.

### **General**

- Planning permission for Phase II decommissioning has now been received. This grants permission for the construction of the facility to remotely retrieve and package the waste in the Shaft and Silo, and allows for the first phase of demolition of redundant buildings. It also allows for D3110 to be converted into an ILW store, but imposes conditions which we are exploring.
- A site accountancy exercise took place on Wednesday, June 5 to demonstrate the adequacy of the new site alert system.
- Mike Brown was seconded to NDA on 3<sup>rd</sup> June 2013 as the Strategy Implementation Manager.
- Councillors and officials from the Planning, Environment and Development Committee of the Highland Council visited the site in June. Following an introduction from Mark Rouse and a tour of the site there were discussions on various topics.
- A planning application was lodged with Highland Council on 27<sup>th</sup> June of a proposed demolition. This is for the removal of the Shaft cover building and Ultra-filtration Pilot Plant facility in order to clear the site for construction of Shaft and Silo Retrieval facilities.

### **Reactors**

#### **Dounreay Fast Reactor (DFR)**

- The Reactor inspection is now complete. Initial inspections showed mechanical damage as well as swollen and split fuel elements. Dose rate surveys have been completed of the core internals which show radiation levels below expected values. Trial lifts of fuel elements are now complete. A new programme showing a revised methodology for reactor preparation and element removal has been prepared and is being discussed with NDA.
- Three lead baths weighing between twenty-one and twenty-eight tonnes each have been hoisted out of the redundant Dounreay Fast Reactor.
- The 9.5 tonne historic canning station was inspected for NaK (liquid sodium) contamination in a controlled environment because of alkali metal potential. It was found to be free of NaK and arrangements are now underway to disposition it into the LLW stream.
- Concrete cutting trials for the DFR Pond walls has commenced, due to the dose from the walls and floor this will be carried out semi remotely.

#### **Prototype Fast Reactor (PFR)**

- The characterisation of the surge tank vault was initiated by undertaking a remote radiation and camera survey. This vault has not been accessed in over twenty years but the vault and tanks appear to be in good condition with no significant radiation.

- Asbestos removal has been completed in the ventilation annex.

### **Fuel Cycle Area Decommissioning**

- **D1206:** Work continues to remove Window 3 from the Breakdown cave. A remote visual and radiological survey of the Low Active Cell in support of ILW characterisation has been completed with preparations for a survey of the Medium Active Cell now commenced.
- **D1204:** Relocation of the pond clean-up unit is now complete.
- **D1251:** the Post Irradiation Examination Cave (PIE) shield doors have been removed and ventilation system decommissioned leading to free breathing access. This work supports the DMTR decommissioning. Decontamination of the sentencing tanks has now commenced.
- **D1208:** The first stage of removal of acidified heel in tank 3 has been successfully completed. Further work is in progress. Mixing trials to identify the drum design for DFR raffinate is in progress.

### **Shaft/Silo Decommissioning**

- Four of the seven pre-HAZOP design reviews are now complete.
- Sludge trials to support design is progressing.
- The new low active drain is in service.
- Post operational clean out (POCO) activities for the Ultrafiltration Pilot Plant have been initiated.

### **Waste and Fuels**

- To date, seven shipments of fast reactor breeder material was delivered safely to Sellafield and seven shipments of waste has been returned to Belgium.
- **Low Level Waste:** Construction of the new Low Level Waste Facility continues with the erection of the structural steel and roof cladding in the Demolition and LLW vaults now complete. Preparatory groundwork for the pump station and reinforced concrete pavements is now complete. Work continues on identifying a date for the construction of the 3<sup>rd</sup> vault.
- **All Waste BPEO:** The review has now been completed and provides an overview of radioactive waste disposal at Dounreay, outlines the methods used to measure the radioactive composition of solid waste and reviews the waste assay methods. The review concludes that the site continues to be in line with current industry practices, which are consistent with Best Practice standards.
- **WRACS:** A review of progress of the in-drum conveyer systems were undertaken by Fontijne. Concept development for the mezzanine and containment structure is now complete.

## Environmental Restoration

- **Discharge authorisation:** DSRL has submitted its response to the European Commission's request for additional information on the Article 37 update. Scottish Government and DECC are currently reviewing the response.
- **Particules:** Monitoring of beaches continue.
- **Liquid Effluent Discharge system:** Options for the decommissioning of the entire liquid effluent discharge system are currently being considered. A draft Environmental Safety Strategy is in preparation and future updates will be provided on the development of a short-list of options and the options assessment process.
- The **Environmental Closure and Demolition** Department (ECD) are in the process of reviewing the extant Contaminated Land Safety Case with the view to developing a new Safety Case to cover the full scope of their activities - Demolition of facilities, and the Characterisation, Remediation and Restoration of the land. The scope of the new Safety Case has been noted by DSSWP and production is ongoing.

## Staffing

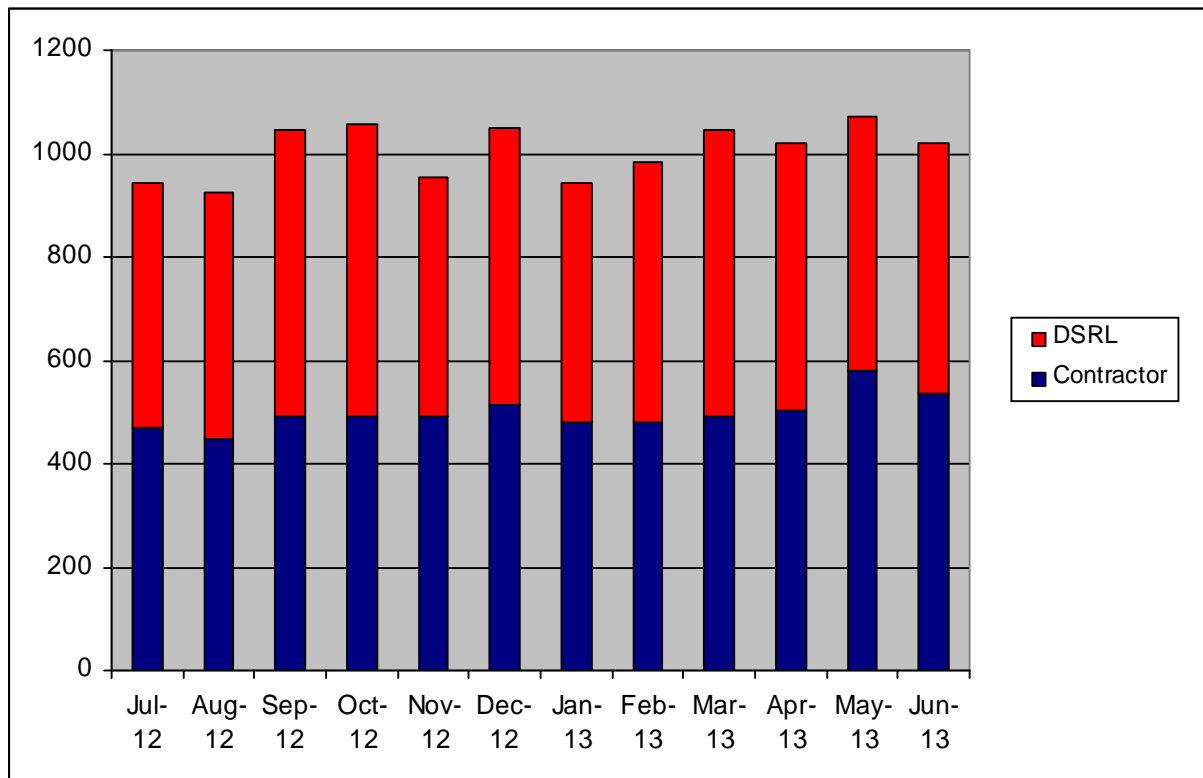
	<b>FTE Target</b>	<b>FTE Actual /Forecast</b>
Current	974.99*	921.8**
YE Outturn	-	974.99

\* target is 974.99 DSRL employees (full time equivalent)

\*\* includes actual 780.6 FTE employees and 130 agency staff

During June 2013 there were

- 2 new start
- 4 resignations
- 0 dismissal
- 0 VER
- 1 Retirement
- 0 Death in Service

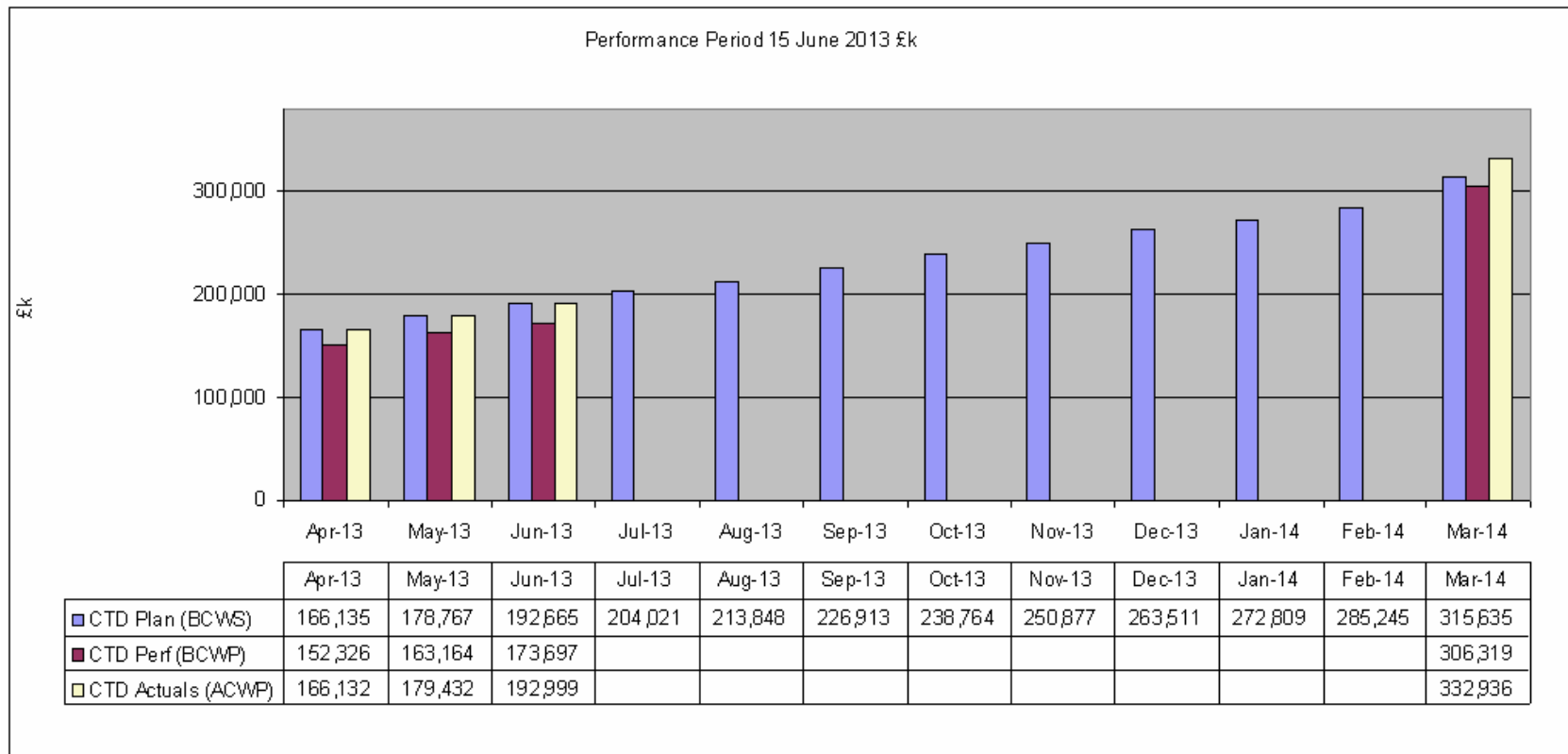
**DSRL/Contractor site access data**

Note that the DSRL staff numbers are lower than the FTE data because on any given day there are certain groups of staff not on site, for example – long term sick, maternity leave, those working off site (Dounreay.com) etc.

**Procurement update**

- **CNC Firing Range:** Following planning permission approval a contract has been awarded to MM Miller.
- **Shaft/Silo decommissioning:** Tenders have now been received for the Shaft Intervention Platform.

Dounreay Site Restoration Ltd  
7<sup>th</sup> July 2013



**GLOSSARY**

<b>Abbreviation</b>	
DACR	Days Away Case Rate
DCP	Dounreay Cementation Plant
DSRL	Dounreay Site Restoration Ltd
EIA	Environmental Impact Assessment
ES	Environmental Statement
IFBS	Irradiated Fuel Buffer Store
IFC	Irradiated Fuel Cave
LLLETP	Low Level Waste Effluent Treatment Plant
LLW	Low level waste
LTA	Lost Time Accident
mSv	milli Sieverts
NDP	NaK Disposal Plant
OJEU	Official Journal of the European Union
ONR	Office for Nuclear Regular
PBO	Parent Body Organisation
PCP	Project Control Procedure
PFR	Prototype Fast Reactor
PSR	Preliminary Safety Report
RIDDOR	Reporting of injuries, Diseases & Dangerous Occurrences Regulations.
RSA	Radioactive Substances Act
SEPA	Scottish Environment Protection Agency
SID	Sodium Inventory Destruction Plant
TRIR	Total Recordable Incident Rate