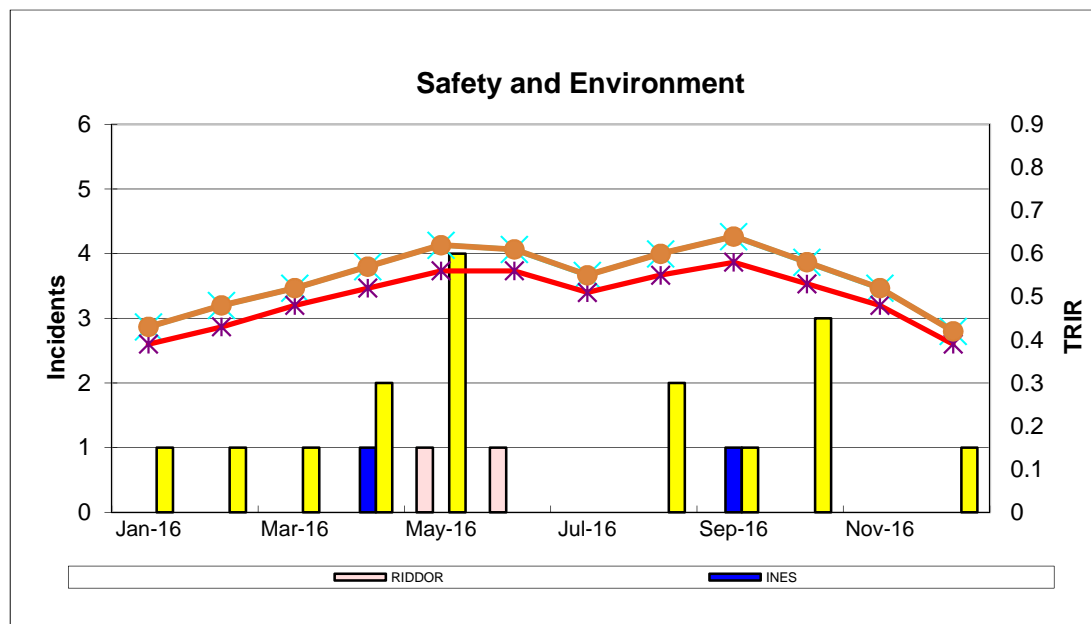


Dounreay Report to Dounreay Stakeholder Group Up to end December 2016

Site decommissioning programme

Discussions are ongoing with NDA on the updated decommissioning plan which reflects the prioritisation and additional scope for nuclear materials. During 2017, the site's delivery priorities will be the exotics programme, breeder removal and improved resource utilisation – always ensuring that work is undertaken in a safe, secure and environmentally responsible manner.

Health, Safety, Security and Environment



- The site has gone 133 days (as of 10th January 2017) without a lost time accident.
- The site conducted a site wide safety culture survey in November. An independent expert is in the process of collating and analysing the data, and will be following up on specific trends and results at the site. A final report is scheduled for completion by the end of March. The outcome will be made available shortly thereafter to the wider workforce.
- Work is ongoing to provide further information to SEPA in respect of the waste containers following a small number which showed signs of a build-up of pressure. Dounreay is on schedule to provide the additional information to SEPA by the end of February 2017.
- As previously mentioned, the Dounreay Improvement Team was stood down at the end of 2016 and the Chief Nuclear Officer has taken ownership of the improvement plan. The CNO

Improvement Plan has been put in place, and will be a living document – reviewed and updated on a monthly basis.

- The “Emergency Arrangements for Local Resident” handbook was last reviewed and revised in 2014. In accordance with The Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPPIR), Vulcan NRTE, DSRL and The Highland Council are undertaking a review of this handbook. If any significant changes are identified to the emergency measures detailed within the handbook, it will be revised and re-issued to local householders within the Detailed Emergency Planning Zones.

Site performance

Appendix 1 provides information of the key project milestones for 2016/17. Specific performance achievements are outlined below.

Reactors

Dounreay Fast Reactor (DFR)

- Work has started to cut up the Dounreay Fast Reactor pond wall using a remotely operated saw. The pond top cap is the first cut needed to separate the pond liner from the pond structure. The next step is to cut the wall into blocks that will be wrapped and transported to the site’s waste processing and disposal facilities. The team carried out trials in T3UK at Janetstown and Bower to develop the technique, test the saw, and train the operators.



- Work to construct the retrieval cell on top of the DFR reactor has commenced.
- The concept design for the DFR reactor and circuit dismantling has been completed and is now going through an internal review process.
- The caustic charge tanks from the DFR containment building have been removed. A piece of kit (the Winfrith Bowser) has been transferred to PFR where it will be processed to remove the alkali metals.

Prototype Fast Reactor (PFR)

- The largest single load to date (965 kgs) was processed through the Sodium Inventory Destruction Plant.
- The old heel pool pump and mast were successfully removed from the reactor during December. Work is now progressing to remove the umbilical.

Fuel Cycle Area

- The D1217 south cell condition was completed and the roof blocks removed. The structure is now ready for demolition.
- The plumbing modifications for the change room extension in D1204 are complete.

Fuels

- The programme to remove the inventory of nuclear material from Dounreay is progressing and is fully compliant with all regulations which govern nuclear transports.

Waste

- Active trials to maximise grouting of HHISO containers has started.

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In-situ disposal was significantly preferred over either ex-situ option for Category 2 wastes. Off-site disposal, which would be to the nearby LLW disposal facility, is the least preferred by a large margin due to the limited capacity of the facility. In-situ disposal is much more favourable than either ex-situ option in terms of worker health and safety, and risks and impacts on the local community during the waste disposal process.

In-situ management was significantly preferred to either ex-situ option for Category 3 wastes. These wastes would be left to radioactively decay in-situ, with the land managed accordingly. The preferred disposal option for Category 4 was disposal within existing void space.

A Draft Site End States Decision Paper is being prepared following NDA's guidance and Expectations for Business Cases and Value Management and is due to Dounreay's Senior Strategy Committee by the end of January.

Interim End State Landscape Options

- The Landscape Options Assessment has been completed. Three options have been developed which are:
 1. Meet minimum NDA contract requirements, with services, roads and floor slabs left in place,
 2. Restore site to a more natural state by removing most services, roads and floor slabs and create a heritage trail,
 3. Create a development site with new roads constructed around 4 distinct development areas, including a heritage trail, coastal gardens, ponds, tree screening belts and grass mounds.

A decision document identifying Option 2 as the preferred option has been presented to the Dounreay Senior Strategy Committee for their review and agreement. Option 2 presented the lowest long-term costs for NDA, provides future flexibility for re-use and is more aligned with Local Planning Authority. Dounreay is awaiting NDA's decision.

Liquid Effluent Discharge System

- A radiological survey of the four redundant liquid effluent discharge pipelines has been carried out. These pipelines extend 600m into the ocean at a depth of 20m below the seabed. The survey was undertaken using an off-shelf remote operated vehicle (ROV), coupled with radiation detectors. A number of physical blockages were encountered in the pipelines which allowed a survey of 911m (total from the 4 pipes) to be completed.

The radiological survey data was used to inform closure options for the radioactive liquid effluent discharge system, which includes the sub-seabed tunnel, along with the old and new discharge pipework. This study built on work undertaken in 2009 that assessed closure options for the old sub-seabed diffuser chamber. It became evident during the Options Study that different options will apply to the land, sub-seabed and seabed components of the system. It was also recognised that several of the options, such as total removal of the system would challenge current constraints such as the Interim End State date. The workshop was attended by DSRL, Amec FW and Magnox technical staff, with an observer from SEPA (Linda Buchan) also in attendance. Marine Scotland was unable to attend the event but DSRL are engaging with them separately. The results of the options assessment are being used to inform the Action Plan for the disposal of the old pipework which will be submitted to SEPA by 24 April 2017.

Particles

- A review of the Particles BPEO is underway. While this is a technical review it has included a review of the stakeholder consultation undertaken to inform the BPEO which was published in 2008.
- In December 2016, during the routine monitoring of the foreshore, a particle was detected and recovered which had different physical properties from the particles previously found. Information has been provided to SEPA and awaits further discussion on this.

Heritage

- The Dounreay Heritage Advisory Panel held a meeting at the National Museum of Scotland on 19 Oct 2016. Representatives from DSRL, NDA, Historic Environment Scotland, National Museums Scotland and the University of the Highlands & Islands (UHI), attended.
- UHI PhD student, Linda Ross, gave a talk to Dounreay staff about progress with her studies concerning the impact that Dounreay had on the region in the 1950s and 1960s. Linda also updated Dounreay managers and the DSG socio economic sub-committee, about her planned research for the next two years.
- The PFR stone sculpture was installed by Morrisons at the entrance to Nucleus - The Nuclear and Caithness Archive, in Wick.
- Two heritage objects were collected in the period;
 - Dounreay Improvement Team lanyard
 - Silver bracelet charm with image of sphere
- Four leavers completed a Dounreay Memories form.



General

Staffing (as at end of December 2016)

	FTE Target	FTE Actual /Forecast
Current - DSRL	1,252 (LTP)	1143.2
Current – ASW	N/A	150

- December 2016: 5 new starts (3 contractor conversions) and 2 resignations.

Dounreay is continuing to invest in young people by providing employment through the graduate and apprentice schemes. This year (2017) up to 8 apprentices and up to 10 graduates will be recruited.

Misc

The Dounreay.com public information office refurbishment is complete and the upstairs of the building is now being fully utilised by the site's Human Resource and Training Administrators as well as holding all full day training courses in the facility. The building has had new life breathed into it and the town centre is also benefiting from the staff who are now located there.

More than 45,000 people were reached with Dounreay's online Advent calendar campaign on Facebook and Twitter in the run up to Christmas. During each of the 24 days, a different team set out their achievements which have helped move the site closer to its interim end state during 2016.

Dounreay Site Restoration Limited

11th January 2017

APPENDIX 1: PROJECT MILESTONES FOR 2016/17

Area	Milestone	Due Date	Status
FCA	D1206 – Decommissioning sample tank annex D1217 –	31 Mar 17	

GLOSSARY

Abbreviation	
BCP	Baseline Change Proposal
DACR	Days Away Case Rate
DCP	Dounreay Cementation Plant
DFR	Dounreay Fast reactor
DIT	Dounreay Improvement Team
DMR	Dounreay Modification Report
DMTR	Dounreay Materials Test Reactor
DPF	Dounreay Planning Framework
DSRL	Dounreay Site Restoration Ltd
EIA	Environmental Impact Assessment
ES	Environmental Statement
IFBS	Irradiated Fuel Buffer Store
IFC	Irradiated Fuel Cave
INF	Incident Notification Form
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
PFA	Pulverised Fly Ash
PFR	Prototype Fast Reactor
PFR	Prototype Fast Reactor
PSR	Preliminary Safety Report
RAMT	Radioactive Material Transport
RIDDOR	Reporting of injuries, Diseases & Dangerous Occurrences Regulations.
RSA	Radioactive Substances Act
SEPA	Scottish Environment Protection Agency
SID	Sodium Inventory Destruction Plant
STA	Sample Tank Annex
TRIR	Total Recordable Incident Rate
WRACS	Waste, Receipt, Assay, Characterisation and Supercompaction