

Dounreay Progress Report as of 9 October 2018

DSG(2018)P026

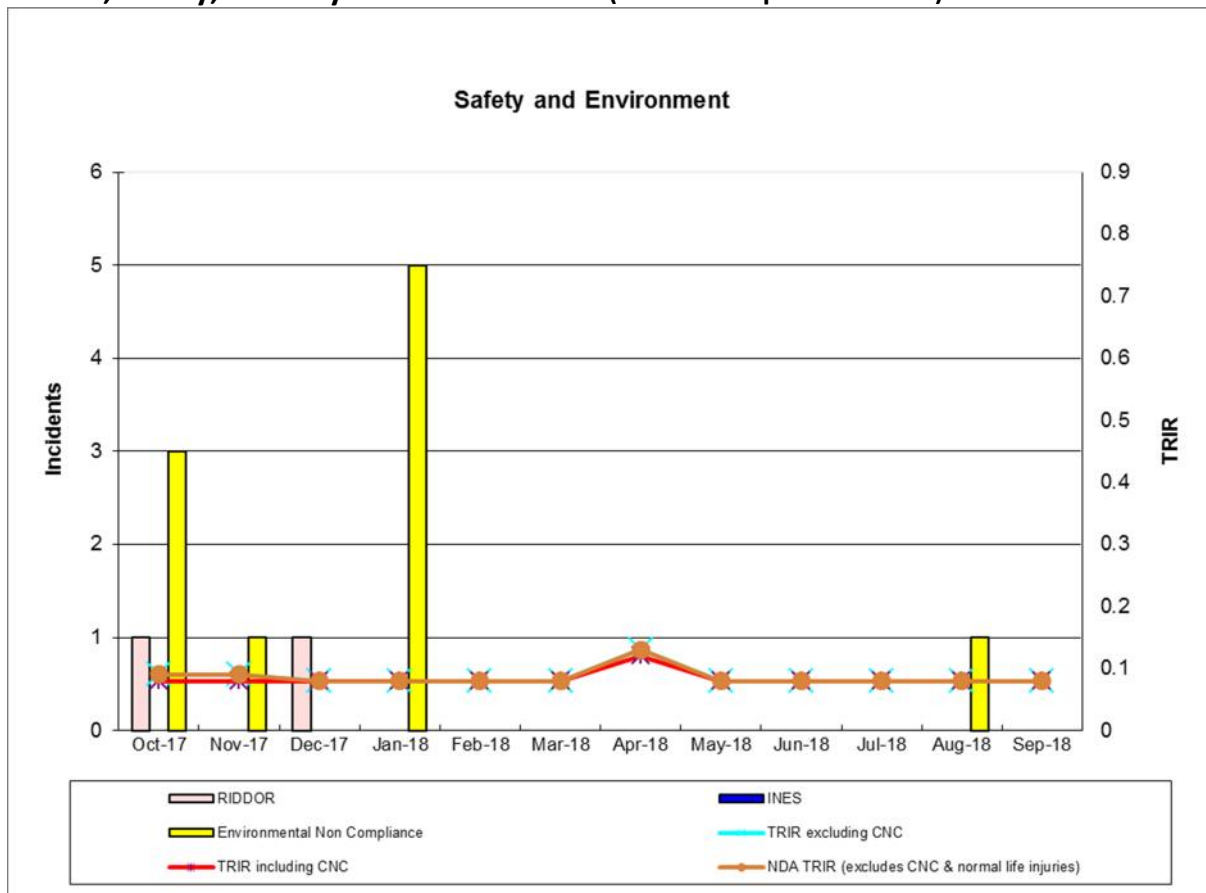
Site decommissioning programme

The site's delivery priorities continued to be the exotics programme, breeder removal and improved resource utilisation – always ensuring that work is undertaken in a safe, secure and environmentally responsible manner.

The Dounreay Team has now submitted its baseline change proposal to the NDA setting out the impact of delivering the exotics work on the wider site decommissioning programme. This has required a substantial effort from lots of people over many months. This is now being assessed by the NDA. Once agreed the new plan will then allow facilitation of the production of a single programme which the site can get behind to deliver.

NDA has provided Dounreay with additional funding of £30M for 2018/19, providing an annual site budget of around £205M. Following completion of the un-irradiated exotics programme funding is expected to return to the planned assured funding (the level specified in the contract) of around £176M/year (not including inflation).

Health, Safety, Security and Environment (as at end September 2018)



-) As of end September 2018, it has been more than 350 days since a lost time accident and the site's total recordable incident rate remains at 0.08.
-) During this period of reporting (and since beginning of financial year) there has been no lost time accidents or RIDDOR reportable events.
-) An investigation is underway into a dropped item from the LLETP (low level liquid effluent treatment plant) scaffolding. Action has been taken to raise awareness with other projects highlighting the potential for similar events and ensuring learning is shared.
-) SEPA visited site during October to carry out a number of compliance inspections. One inspection was to assess completion of the RSA Variation 2 project and the project team presented evidence showing the effective closeout of 130 actions. The outcome was successful with SEPA regarding Dounreay as compliant with the Variation 2 notice.
-) On 12 September the annual site demonstration exercise (Delta 54) took place and was witnessed by ONR. The exercise tested the site's response to a safety event and ONR deemed the exercise to be an 'adequate' demonstration of the site's emergency arrangements and gave a green rating. During this exercise an electronic notification system was tested with one local resident with the intention to roll out to near neighbours once confirmed it is effective.
-) The Dounreay team also supported the Vulcan Emergency Exercise including the use of off-site facilities in Dounreay.com Thurso. This exercise took place on 26 September 2018.
-) DSRL achieved 98% staff attendance on Unconscious Bias training modules. This exceeded the target set for 95% attendance.
-) Dounreay has been shortlisted for Best Safety Programme at the Babcock Health and Safety Excellence Awards. The nomination recognises the work undertaken to introduce Dounreay Professionalism and the resulting improvements in safety, security and environmental performance. The winner will be announced in November.

Site performance

Appendix 1 of this report provides information of the key project milestones for 2018/19. Specific performance achievements are outlined below.

Reactors

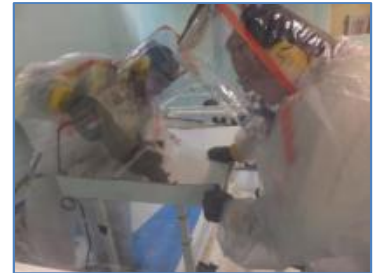
-) Six months of preparation including maintenance and assurance has resulted in the successful movement of a charge hole instrument plug from inside the reactor to its original position. The task involved two flask adaptor build-ups and posting of rotating shield. It was an important stage in preparation for the deployment of the water vapour nitrogen tools into the reactor.
-) PFR has received the first of 3 large water vapour nitrogen application tools, which will form part of the treatment infrastructure for the reactor vessel.



-) Uniper Technologies did a vent flow measurement at PFR to support environmental compliance. Previous measurements had given a wide distribution of results, to Uniper came in using a helium tracer gas technique which has not been done on site before. This allowed the project team to update the emissions agreement resulting in a reduction in reported gaseous emissions.
-) At DFR, a project review has resulted in a re-assessment of the methodology for pond block removal to ensure the process is ALARP and the most effective method from a waste generation perspective.

Fuel Cycle Area

-) **D1200:** Lab 79 in D1200 labs has been decommissioned, meeting a PBI. The lab was used to carry out analysis of site effluent discharges and became redundant in 2016.
-) **D1200:** Lab 80 is now decommissioned, while in lab 86 the ventilation ducting has been removed and Lab 87 has moved from phase 1 decommissioning to phase 2.
-) **D1204:** The pond structural assessment is now complete and the high active cell characterisation is underway. Medium Active Cell decommissioning activities are ongoing.
-) **D2001:** Preparations for the waste cell filter replacement is ongoing with the access platform and scaffolding now installed. Isolation of existing services has been made and re-routing of services has now commenced.
-) **D1211:** The pipework has been drained and a health physics survey of wall and floors have now commenced within the pump well.
-) In August a large section of ventilation ducting and its supporting gantry was dismantled in the north of the FCA. A 60m section of duct was removed as part of a ventilation improvement programme. The dismantling was also required to facilitate the building of the new DCP store extension 2. This work was carried out in partnership with Caithness Scaffolding and JGC Technical and Engineering Services Ltd.



Fuels

-) Good progress continues to be made to remove nuclear fuel from the site. Advice has been provided to community representatives that they may see a strong security presence before and during the next phase of transports. This is normal for nuclear materials with a high security rating. We apologise for any temporary inconvenience caused by these planned measures.

Waste

-) Over the last three months (May to July) there has been a 50% reduction in the backlog of LLW drums waiting to be size reduced using the WRACS facility.



-) Following on from updates provided at the July sub group and September public meeting, work continues to progress assessing the feasibility of treating of some low level waste. A contract for a feasibility study is expected to be awarded during October with decisions taken in the new year.

Construction directorate

-) A construction directorate is in the process of being established under the leadership of Construction Director David Hubbard.
-) The first two projects to transfer to David are shaft and silo and an extension to the Dounreay Cementation Plant store. David's team will manage construction activities and, when complete, will hand the facilities back to Waste for the operational phase.
-) The shaft and silo project is now remobilising for full delivery. Preparation work on scheme design and detailed design and safety case is ongoing.
-) A contract has been awarded to GRAHAM Group to construct an extension to the Dounreay Cementation Plant store to house packaged intermediate level waste. The £22 million project is expected to start in October and take around 3 years to complete.

The Interim End State Delivery Team

-) Work is ongoing to redefine the Dounreay end state which will outline the site wide strategic options for the site which will be reflected in the decommissioning programme going forward. This also involves joint discussion between DSRL, SEPA and the Head of Highland Council Planning Authority to agree in principle the facilitation of a zonal closure of the site in advance of the interim end point.



-) GRR Guidance has now been jointly published by SEPA, the Environment Agency and Natural Resources Wales. The Guidance explains what operators need to do to surrender their environmental permits when all activities involving the management of radioactive waste have ceased. The published GRR will be used to provide a framework against which the ongoing decommissioning and remediation of the site can be progressed.

Particles:

-) Between 5 July and October 2018 a single particle (relevant) was detected and removed from the West Dounreay Foreshore.
-) Analysis of the unusual particle recovered from the Dounreay foreshore in 2016 is ongoing.

Heritage

-) Twenty heritage objects were collected in the period:

1. Dounreay pen
2. Two UKAEA key rings
3. UKAEA screwdriver set
4. Crane driver's certificate dated 1981



5. Caithness Glass bowl on wooden plinth for UKAEA winners of “Leaders in innovation” in 2005.
6. 2018 NDA mug
7. Metal pin badge with DFR silhouette and “UKAEA Dounreay”
8. UKAEA eraser
9. Flexi armband
10. DFR postcard dated 1962
11. Densitometer for TLD film
12. 20 finger thermoluminescent dosimeters (TLDs)
13. TLD “chips” & glass annealing plate
14. Two yellow plastic TLD badges
15. Two brass TLD powder sieves
16. Dosimetry services reference handbook. Dated March 1999.
17. UKAEA house rent cards for 1975/76 & 1976/77
18. House rent agreement
19. Dounreay House Owners Association constitution
20. ROC mug featuring ROC and Dounreay logos



-) Three leavers completed a Dounreay memories form.
-) V&A Dundee museum opened in September and various representatives from Dounreay were invited to a preview day. The museum features a model of the DFR sphere, which is on loan from Caithness Horizons and also features work by four Dounreay apprentices who created a travel app called “Wilderness” as part of a country-wide design relay project for the V&A. The museum expects around 500,000 visitors in the first year.

Commercial

-) Dounreay will be present at the NDA Supplier’s Event to be held on 1 November 2018.
-) Three further opportunities have been released via LINC.
 - LINC 3 relates to sampling techniques for Granular Fill Removal and Concrete Core Extraction and the project team is in further discussions with 4 companies.
 - LINC 4 is for the sampling and dispatch monitoring system with submissions currently being assessed.
 - LINC 5 is to support the Primary Cold Trap Loop (PCTL) vault for the removal methodology for the alkali metal pipework. This is due to be launched shortly.
-) JGC Engineering and Technical Services Ltd were awarded the contract for LINC opportunity 2 (in-cell size reduction methodology).
-) Five short-listed companies tendering for a contract to demolish DMTR were on site in July presenting their bids to the panel evaluating each tender. A review of these bids was completed in August and discussions are ongoing with the preferred bidder to finalise details before the contract is signed.

-) The contract with Profile Security, the Civilian Guard Force (CGF), has been extended until March 2020.
-) Tender returns for the decommissioning services framework contract have been received and are currently being assessed. An outcome is expected to be communicated soon.

General

Staffing (as at end of September 2018)

	FTE Target	FTE Actual /Forecast
Current - DSRL	1,105	1134.0
Current – ASW		120

September 2018: 14 new starts, 1 resignation, 1 VER

-) **Voluntary redundancies:** One year on, 127 people have left on VER as at the end of September. The remaining 17 are expected to leave by April 2019. A Transition Board has been established to provide governance and overview of the VER programme and associated Management of Change (MoC) where organisational changes have been made. A key activity has been to address concerns about potential loss of knowledge for the site through the implementation of a new Knowledge Management process to ensure that key information is captured and passed on as individuals leave the business.
-) **Recruitment** of apprentices and graduates continued this year with 8 apprentices and 11 graduates being offered positions. David Hubbard has now joined the Dounreay team as Construction Director and Alexander (Mac) MacGill will take up his post as Security and Resilience Director in October 2018.

Meanwhile, 8 apprentices completed their training and were presented with their indentures in September. Guest speaker, Simon Middlemas provided an insight into the future opportunities for the area after Dounreay is decommissioned.

Three new business apprentices started work on site in September. During their 18 month apprenticeship they will complete a Scottish Vocational Qualification in business and administration while getting hands on work experience.



-) **Dounreay Professionalism Awards:** An event took place during September 2018 recognising the contribution of individuals and teams during the first year of implementing the Dounreay Plan and new standards and expectations. The following day a leadership conference was held with around 100 staff representatives.

) **Visits / Events:**

- Greg Clark, MP (Department for Business, Energy and Industrial Strategy Secretary of State) visited the site in August where he met with some of the apprentices and new graduates during their first week working at Dounreay. He also took the opportunity to visit the CNC.
- Dounreay featured in an episode of Hidden Britain by Drone presented by Tony Robinson on Channel 4 during August.
- Gail Ross, MSP visited Dounreay in August where she met with Trade Union representatives, Women’s Network members and received an overview of the apprenticeship programme.
- A family fun day was held at Dounreay in September.



- During September, Mr Niizuma, Parliamentary Vice-Minister, Japanese Ministry of Education, Culture, Sports, Science and Technology visited the site with three colleagues where they received a series of presentations and visited PFR and DFR.



- NDA also hosted two Japanese visits during September when they welcomed senior members of staff from the Nuclear Damage Compensation and Decommissioning Facilitation Corporation and on a separate visit the Executive Director of Monju.
- National Inclusion Week was held during 24-30 September which is an annual campaign to raise awareness of the importance of inclusion in the workplace and highlight the business benefits to having a diverse and included workforce.
- Members of IChemE visited site at the end of September to assess the site for re-accreditation. The visit went well and a draft report with some excellent feedback has been received along with a few recommendations for improving the current scheme. The official results of the re-accreditation are expected in November.

Dounreay Site Restoration Limited

9th October 2018

PROJECT MILESTONES FOR 2018/19

Area	Milestone	Due Date	Status
Fuel Cycle Area	D1200 Lab 79 decommissioned	Aug 2018	Complete
Fuel Cycle Area	D1204 mixer settle boxes	Sept 2018	
End State	NDA Gate A paper for redefining the end state	Sept 2018	
Waste	Waste verification checks of D3110 wastes	Dec 2018	
Reactors	Manufacture complete for skid set A and DFR skid set	Dec 2018	
Fuel Cycle Area	First block cut from cell walls in D1217	Jan 2019	
Reactors	Design, manufacture and trials of 4 tools for PFR reactor dismantling.	Jan 2019	
Waste	Shaft and Silo HAZOP 2 studies	Mar 2019	
Reactors	Breeder fuel 8 flasks	Mar 2019	
Waste	Shaft and Silo borehole monitoring	Mar 2019	

Key:



On target to deliver
At risk
Missed

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