

## **DOUNREAY SITE RESTORATION LTD DSG SITE RESTORATION SUB GROUP REPORT, OCTOBER 2022**

*Current as of 8 October 2022*

### **Introduction**

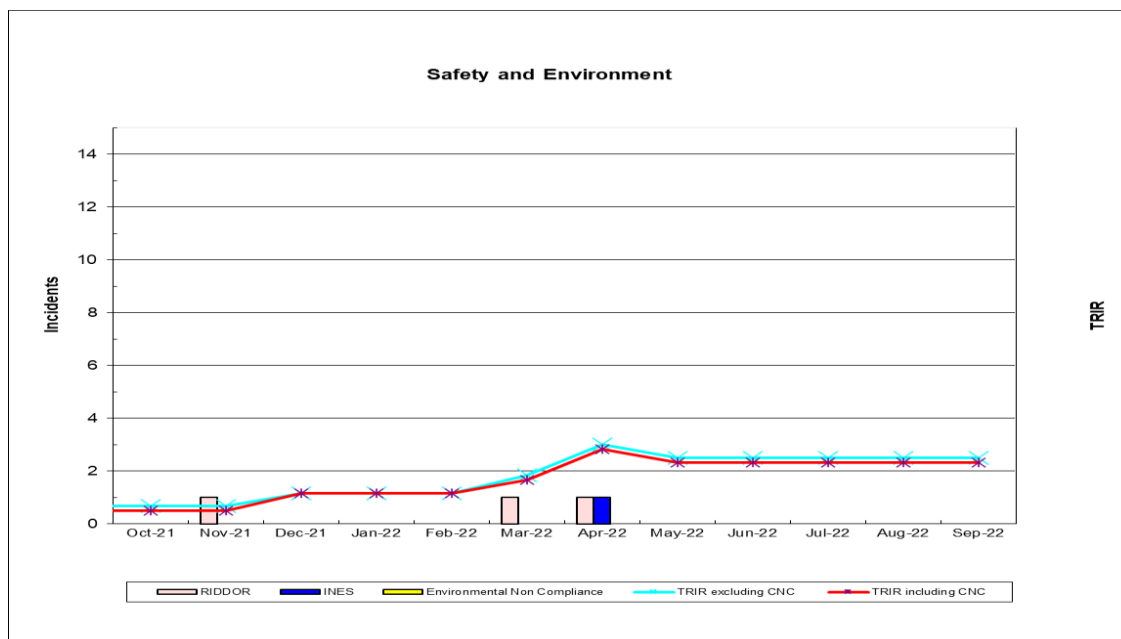
- Work continues to progress the joining of Dounreay together with Magnox. By the end of 2022, most internal and regulatory processes shall be nearing completion, with implementation on 1<sup>st</sup> April 2023. The site licence application was submitted along with the majority of the applications to transfer the environment permits and licenses, in June and July.

Work is currently underway to rename and rebrand Magnox Limited, to represent the new organisation that it will become (currently being referred as One Co). The Management of Change, which details the future organisation has completed due process and was formally submitted as part of Magnox's Site Licence Application. We have received agreement from SEPA to transfer the two Pollution Prevention and Control (Scotland) Regulations 2012 Permits and the three Controlled Activities Regulations (CAR) Licences to Magnox Limited next financial year.

When Dounreay joins together with Magnox, DSRL employees will become employees of Magnox Ltd. The Transfer of Undertakings (Protection of Employment) Regulations 2006 (known as TUPE) which protect employees terms and conditions, will apply to this transfer. Contracts with the Supply Chain will be changed (novated) to reflect that Magnox is the contracting authority and not DSRL.

- Dounreay is moving to a programmatic model to deliver the Lifetime Plan from April 2024 onwards. Fit for Future is a 2-year initiative to develop and improve the systems, structure, processes and people to support this. An independent gate 2 review has been carried out and actions identified to strengthen governance. Recruitment continues for programme managers and Heads of Profession. Becky Ruddy, currently head of the Fuel Cycle Area, is the first of the 3 new programme directors-designate while Simon Coles is the first of the new heads of profession-designate in the discipline of project management.
- While all Covid restrictions have been essentially lifted the workforce continues to adhere to distancing and where individuals feel the need they are encouraged to continue to wear face masks. Staff are also encouraged to stay at home and avoid contact with others if they have symptoms of a respiratory infection. The numbers of those having to stay away from site have lessened over the past months.

**Health, Safety, Environment, Security**



Graph current as at end of September 2022

- The TRIR remained at 0.15 (for end September).
- During August, a person cut their finger on the metal case of an instrument while removing the connection from a circuit board.
- On 28 August some loading operations were being carried out using a telehandler. The telehandler was boomed out to full reach with only one of the stabilisers down. There were materials in the area where one of the stabilisers would sit and this had prevented the driver from putting the stabiliser down. Regulators were informed and a site investigation has now been completed.
- On Tuesday 27 September contract joiners were working on installing a threshold strip to a door frame. A gust of wind caught the door causing it to close suddenly on the fingers of one of the joiners causing an injury.
- SEPA issued a Warning Letter in August 2022 relating to following procedures arising from the Laundry Fire. (Four non-compliances recorded in writing by SEPA August 2021).
- The recovery plan for the Sodium Tank Farm event continues with routine information being shared with both regulators. The formal updates are continuing against the required timescales. SEPA issued an Information Notice in September 2022 requiring DSRL to provide information relating to the drains of the sodium tanks. DSRL is on target to deliver this information noting that there is considerable work to be done and an extended timescale has been agreed with SEPA.

**Particles**

- On 19th July one minor particle was recovered from Sandside beach. No particles have been detected from the foreshore, Murkle or Strathy Beach since the last update.
- The issue of a higher number of particles was discussed at the recent PRAG(D) meeting. The high rate of finds did not persist into spring and summer. The current interpretation for the high number of finds in winter continues to be weather related. Dounreay is in the early stages of an

ongoing programme of work related to studying the movement of particles in the marine environment in collaboration with UHI. As this progresses, DSG will be kept updated. No additional conclusions are expected to be reached in the near future.

- Discussion with SEPA and PRAG(D) on the results of the beach monitoring trial (in relation to the vehicles/detection system) are continuing. DSRL is awaiting the conclusion and final position of these trials and the americium rich particle.
- SEPA is continuing to review the EASR Permit, which will include a review of the particles beach monitoring programme.

### **Dounreay decommissioning update**

The Life Time Plan continues to be developed. Engagement has continued with NDA on the Dounreay Decommissioning Strategy and Strategic Outcome Specification document with clarity on the key planning assumptions and strategic options. The LTP remains on schedule to be complete for internal approvals by April 2023 and begin the execution of the plan from April 2024. The aim is to complete a plan that is achievable and challenging, built on site values to safely deliver the mission.

The Near Term Work Plan (NTWP) for this year continues to progress. Key targets for this year are:

#### **Stretch targets (currently on track to deliver early)**

- Dounreay Cementation Plan store extension – commence inactive commissioning.
- Approval in principle of DSRL programme business case supporting the LTP by DSRL Board.
- Implementation of the strategic asset management plan.
- Fit For Future – Delivery of FF plan milestones

#### **On target**

- Installation of WVN system to enable passivation of the reactor vessel at PFR.
- Restart of defueling DFR to enable dry storage of remaining inventory
- Phases 1, 2 and (part of) 3 of natural and depleted uranium material shipped to receiving site.

### **Fuel Cycle Area (FCA)**

- The DCP (cementation plant) waste store construction team has completed laying the floor slab. The drum handling crane has been lifted into position through the partly completed roof. Following completion, the 21 remaining roof beams were then installed. The 250 tonne crane left site during September having been part of the site's skyline for 3 years. The lift team completed over 71,200 lifts during this time with the heaviest lift being a 45 tonne steel shield door and the 25 tonne pre-cast concrete roof beams.



- During week beginning 20<sup>th</sup> September, Dounreay received its first 6m<sup>2</sup> concrete box. This waste container is a Nuclear Waste Services approved final waste package suitable for long term storage of higher activity waste (HAW) and future disposal.

## Reactors

- The work to clean out the PFR reactor vessel is continuing. Following the successful completion of the removal of the sodium from the base of the PFR reactor vessel, the next phase is now underway: to install a water vapour nitrogen (WVN) system, which will remove the sodium residues from the reactor vessel and pipework. The vast majority of pipework installation above the 14ft level is now complete and work is on-going underneath linking the previously installed WVN delivery tools, including the WVN delivery skids, to the pipework manifolds. A large area of the 14ft floor level under the west crane maintenance platform has been removed to install the liquid effluent break tank which will be the receipt vessel for the liquid waste arisings from the WVN process. [The picture shows the overall view of the 14 foot floor level of the PFR reactor top. Extensive scaffolding can be seen which is in place to permit the installation and dressing of the EC&I cabling to the multitude of valves and instrumentation which will control and monitor the WVN process.]



- Forty six absorbers which controlled and shut down the nuclear reaction in the PFR reactor vessel are being decommissioned by a small team of Dounreay staff. The absorbers were removed from the reactor during the 1990s after it was shut down.



## Balance of Site

- Dounreay has successfully trialled a new waste route for incineration of its low-level waste, in conjunction with Nuclear Waste Services. Fourteen 200-litre drums of low-level waste were recently transported to waste treatment company Tradebe for incineration. This is a new offsite disposal route that will allow Dounreay to start to look towards use of further diversion routes for some low level waste contaminated materials (such as personal protective equipment, bunding, tools, and glass) so that they can be sent to incineration instead of taking up disposal space in the site's low level waste vaults.



- As part of the low-level waste disposal process, the spaces around the LLW containers in the D3100 are being filled with grout. Trials have been undertaken to confirm that the grout would readily flow between the containers and also tested the membranes that will be used to seal the grout shutters.
- **Site End State Review:** A joint session between DSRL, ONR and SEPA to discuss the preferred Dounreay site end state described in the Gate B Paper has been arranged for 07 December. Activities associated with the implementation of the preferred option are ongoing and include development of 'plan on a page' documents for key areas and facilities across the site – these are designed to simplify and summarise the key end state issues for the decommissioning facilities.

Representatives from the Scottish Government (Diane Hamilton – Policy and Stakeholder Engagement Officer and Daniel Couldridge – Radioactive Substances and Nuclear Decommissioning Team Leader) visited in September and were given an overview of the key aspects of the preferred site end state option.

## Staffing

- The 2022 graduate development scheme cohort met together at Dounreay for the first time recently. The development scheme is an intensive 2-year programme where participants complete 6 month work placements on different projects around site and complete a package of additional training.
- Mark Rouse, Managing Director and Mick Moore, Operations Director welcomed the most recent intake of business and administration apprentices at the beginning of September.. The apprentices have now all joined their teams, where they will gain valuable workplace experience at the same time as studying for a Scottish Vocational Qualification.
- In early October, seven apprentices received their indenture certificates from MP Jamie Stone and Mark Rouse, Dounreay MD. All seven are now fully qualified in their chosen fields, after four years of hard work and dedication. Jack Cormack was presented with the Director's Trophy and Neave Anderson was the winner of the Lachie Macmillan Cup.
- Three people from Dounreay are finalists in the Engineering Construction Industry Training and Development Awards. Holly Cunningham is shortlisted for the Apprentice of the Year Award, Stuart Crichton as Graduate of the Year and DSRL for the Large Employer of the Year.
- Dounreay received a Gold Award from the Engineering Construction Industry Training Board audit for our skills and training charter. This award demonstrates that Dounreay is investing in its employees by providing high quality, committed skills development and training.



## Other information

- On a recent visit to the county, King Charles (the then Prince) took time out to meet with the site's tree planting volunteers and members of Dunnet Forest volunteer group to celebrate planting 100 trees at Dunnet as their contribution to the Queen's Green Canopy initiative.
- Over the past couple of months we have had a number of visits on site as Dounreay continues to be the focus of interest. Visits over the last couple of months included:
  - ONR Chief Executive, Mark Foy
  - Maree Todd, MSP
  - DSG business group meeting with an opportunity to meet the Executive team.
  - Nuclear Safeguards Compliance team
  - David Peattie, NDA CEO
  - Jamie Stone, MP
- Dounreay is supporting a cross industry learning event to be held by the Nuclear Industry Association, the Nuclear Decommissioning Authority and Decom North Sea, at TECA in Aberdeen on Tuesday 11 October. Organisations are encouraged to come along and learn about the challenges and benefits of working with Dounreay on the UK's largest nuclear decommissioning site.

Dounreay Site Restoration Ltd  
8 October 2022

## 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
PIE	Post Examination Irradiation
PRAG(D)	Particles Retrieval Advisory Group (Dounreay)
PSR	Preliminary Safety Report
RAMT	Radioactive Material Transport
REDE	Regulator Evaluated Demonstration Exercise
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