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**DOUNREAY UPDATE REPORT  
as of 14 January 2021**

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**Introduction**

Dounreay Site Restoration Limited (DSRL) will become a subsidiary of the Nuclear Decommissioning Authority on 1 April 2021. Preparations for the transition continue and appointments to senior roles are in the process of being made.

The first is confirmation that Mark Rouse will remain as Managing Director, moving from Cavendish Nuclear to DSRL.

Mark said: "It is a privilege to be asked to stay at the site and continue leading such a highly skilled and committed team.

"We have a number of short-term challenges ahead as we continue to navigate our response to the current pandemic, but there are many exciting opportunities beyond that to deliver a technically challenging decommissioning programme and play an important role as part of the NDA."

**Operations during COVID-19 (updated 14 January 2021)**

Dounreay is fully compliant with the temporary regulations issued earlier this month by the Scottish Government. Since the return from the festive break, staffing levels on site have been around 20% of normal and around half of typical levels seen towards the end of last year, with the majority of people working from home.

Those who live outside of the Highland Council area have been advised not to return to the site before 1 February 2021 at the earliest.

Where work to reduce hazards and comply with safety, security and environmental protection requirements cannot be done from home, this is being carried out with the minimum number of people required within COVID secure arrangements. This is fully compliant with guidance for Critical National Infrastructure, manufacturing and construction sectors.

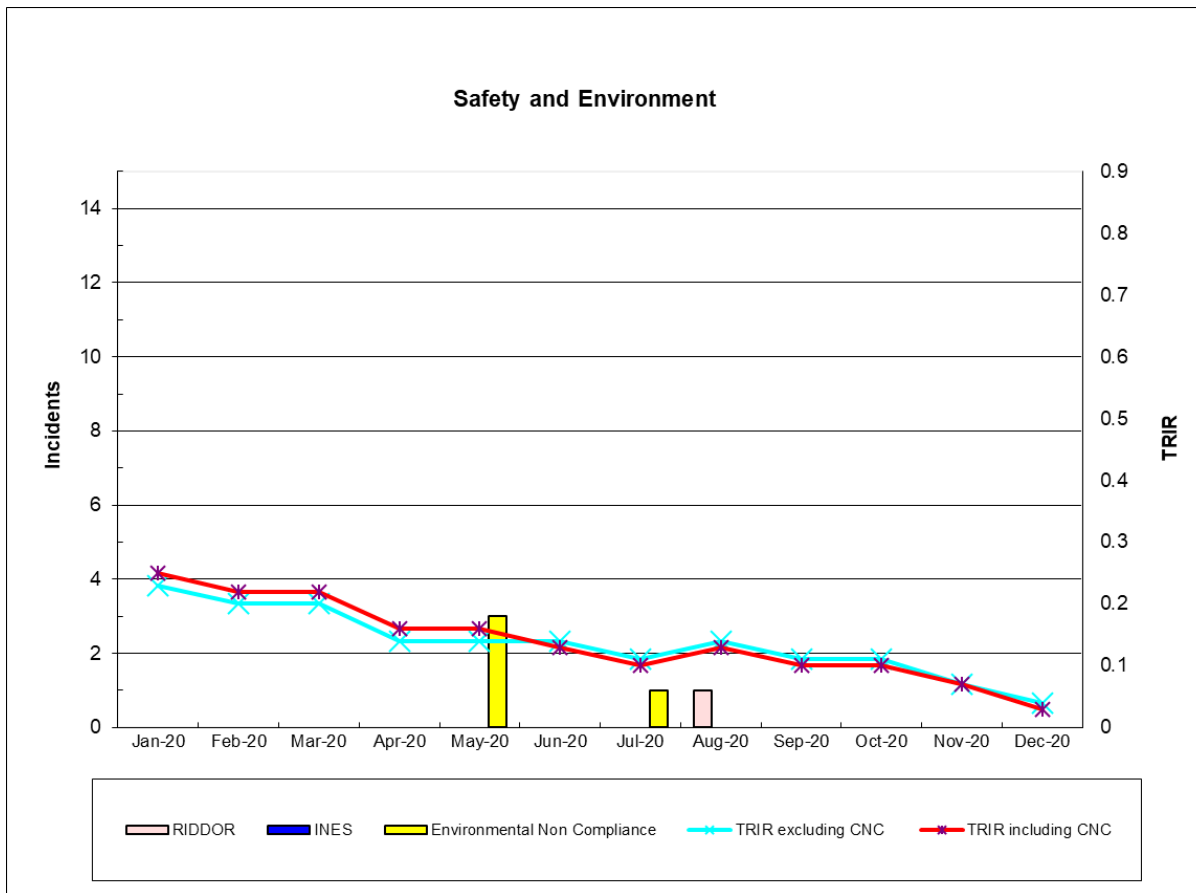
In the last few days, Dounreay's on-site fire and rescue service has reported a number of COVID-19 related absences. As a result, the decision has been taken to temporarily pause hazard reduction work and further reduce the volume of people on site to minimise the demand on the site's fire and rescue service. This will ensure core obligations of maintaining a safe and secure site are met at all times.

Support is being provided to the individuals affected and are in contact with Health Protection Scotland and following its guidance.

The site now is in an open, operational and compliant state, meeting its regulatory and environmental compliance commitments with the minimum necessary personnel. All those who can work from home continue to do so as normal.

We continue to work collaboratively with trade unions and safety representatives to monitor the latest guidance, with the safety of our site and workforce the highest priority. The current situation will be reviewed on Monday 18 January 2021.

**Health, Safety, Security and Environment (as at end December 2020)**



- Senior managers are continuing to engage with teams and ensure that health and safety topics are discussed.
- No environmental non-compliances were reported during November/December 2020.
- The latest total recordable incident rate is 0.04 (as at end December 2020).
- During use, there was an unexpected of movement in remote handling equipment within the Dounreay Fast Reactor. This was immediately made safe by the operators. There was no danger at any time and no operating limits were approached. An investigation found issues surrounding data storage devices which have now been addressed.

**Dounreay decommissioning update**

- As temporary working practices have been put in place, there has been an impact on a large number of programme activities which limits the decommissioning progress to cover in this report. Some work is progressing where it can be undertaken either via remote working, or through teams on site working in a COVID secure manner. Essential maintenance has continued to ensure that the site remained compliant.
- Work continues to develop an updated Near Term Work Plan (NTWP), which is a 3-year detailed plan for site decommissioning. This will sit alongside a wider Lifetime Plan to

provide a blue print through to the site's closure. The NTWP is a 3-year rolling plan which allows detailed planning for the years included. The NTWP is now under final review.

- Milestones for 2020/21 have been identified and are included at Appendix 1. It should be noted that COVID-19 may impact on the ability to deliver these, with the situation kept under review.
- The vault and waste transport teams have started re-stacking half height ISO containers in the low level waste vault. A significant amount of work has been undertaken by the team to assess all the disposed waste and to provide associated necessary assurance. Dounreay has agreed with SEPA to re-distribute the half height ISOs with voidage issues evenly throughout the vault to ensure that any post-closure impacts are minimised.
- Work continues on the new Dounreay Cementation Plant store, with 1,500 tonnes of concrete poured and the building walls now constructed to the first floor level. Just before the Christmas break, the team embarked on the biggest concrete pour of the project so far working to lay the floor slab in the crane maintenance bay. The new intermediate level waste store will hold drums of waste in safe long term storage at Dounreay in accordance with Scottish Government policy on High Activity waste.
- Drilling of Tank 1 in the Sodium Tank Farm at PFR is complete.
- The WRACS facility resumed operations to compact low level waste drums prior to disposal.

### **The Interim End State Delivery Team**

- An unconstrained review of the site end state is ongoing. A contract to prepare a Gate B paper, which will describe the preferred end state option, has been awarded to the 'COSMIC' consortium of companies (NSG, Quintessa and Golder Associates).
- Since the last DSG update, a set of 'Land Quality Indicators' (LQIs) have been developed for radioactive contaminants, non-radioactive contaminants and groundwater. The LQIs have values designed to be applied to key components/areas of the site to indicate whether material (ground or structures) could meet regulatory criteria to remain in-situ without any significant remediation. Where a key component/area of the site exceeds the LQI values, options for remediation including decontamination and/or removal will be considered.

The Land Quality Indicators will be applied to 'key components' for the site. These key components are facilities or areas of land whose individual end state could significantly influence the overall site end state. Initial work to trial the application of the LQIs is ongoing for a number of different zone of the site, with an update on the outcome of the trial expected in the spring.

- DSRL has awarded a contract to Jacobs for a desktop study on closure options for the waste pits, which contain legacy low level waste, including material such as asbestos. Credible options are being developed and assessed. This process will include a workshop scheduled for later this month with 2 DSG representatives invited.

- The full environmental monitoring programme (EMPROG) and groundwater monitoring programme in support of our permit and licence was completed in Quarter 4 (October to December). Despite the current COVID-19 restrictions, work has now commenced on the Quarter 1 (January to March) monitoring programme as this is a statutory requirement. Measures are in place to reduce the risks associated with the transmission of the virus while this work is carried out.
- Work to develop the initial Site Wide Environmental Safety Case (SWESC) and Waste Management Plan (WMP) for the site has continued, and these will undergo external peer review in January and February. These documents are a requirement of the GRR (Guidance on Requirements for Release from Radioactive Substances Regulation). They will be living documents throughout the decommissioning lifetime of the site.
- The IESD characterisation team has provided sampling support to work associated with the Shaft Advanced Transition Works. The information gathered will be used to inform the construction of the Shaft Retrieval building and also highlight any issues that need to be considered in the area from a site end state perspective.

### **Particles update**

- Since the last update (6 Nov), 1 minor particle was recovered from Sandside beach on 8 November, and 1 relevant particle was recovered from the Dounreay Foreshore on 20 November.
- The Murkle and Strathy surveys were successfully carried out and, as expected, no particles were detected.

### **Dounreay Heritage (Oct to December 2020)**

- No heritage objects were collected in the period.
- No leavers completed a Dounreay memories form.
- James Gunn, in his role as Heritage Officer, has drafted an NDA guidance document about selecting heritage objects for preservation purposes. It is based on Dounreay experience and will be reviewed by representatives from the national museums of Scotland, England and Wales.

### **Misc**

- DSRL was delighted to see David Flear, former chair of the DSG, being awarded an MBE for services to health, community care and the community.
- As part of the EDI (Equality, Diversify and Inclusiveness) action plan, DSRL has encouraged staff to take part in the 2020 working families benchmark survey.
- Virtual coffee mornings have continued on a weekly basis to allow staff to connect with each other while continuing to work from home.
- Dounreay's annual awards event took place virtually at the end of last year, allowing more staff to participate than ever before. Hosted by Nicky Marr, the event raised over £3k in donations for the nominated charity – Caithness Mental Health Support Group. The awards are based on the site's values and the winners were:

- Zero harm: Kirsty McIntosh and the Occupational Health team
  - Respect: 'This is me' mental health awareness film contributors
  - Pride: Vera MacAskill, Stores
  - Delivery: Martin Bridge and the IT team (ROC)
  - Innovation: Communications team
  - Confidence: COVID-19 community volunteers
  - Steve Beckett award: June Love
  - Winner of Winners: Martin Bridge and the IT team
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- Due to COVID-19 restrictions, Christmas Friday was a different event this year resulting in an online Dounreay quiz. More than 200 staff took part and raised more than £1,500 for MacMillan Cancer Support.
  
  - The Dounreay Employees Charity Fund provided £2,000 of funding to support the Caithness FM toy appeal. The Dounreay Communities Fund also provided a donation of £1,000.

Dounreay Site Restoration Ltd  
6 January 2021

**APPENDIX 1 – DECOMMISSIONING MILESTONES (2020/21)**

| <b>No</b> | <b>Project Milestone</b>   | <b>Target Completion Date</b> |
|-----------|--|-------------------------------|
| 1         | Integrated Waste Management – Removal of Breeder Fuel (Phases 1 & 2)   | 30 March 2021                 |
| 2         | Shaft & Silo: completion of updating of Project Specific Waste Plan  | 31 March 2021                 |
| 3         | D1200: completion of decommissioning of Lab 103<br>- Phase 1   | 28 February 2021              |
|           | - Phase 2  | 30 March 2021                 |
| 4         | D1217: completion of the roof blocks/plates and shield blocks removal<br>- phase 1                           | 31 January 2021               |
|           | - phase 2  | 28 February 2021              |
|           | - phase 3  | 12 March 2021                 |
|           | - phase 4  | 30 March 2021                 |
| 5         | Effluent Treatment Plant: completion of HAZOP2   | 31 January 2021               |
| 6         | LLW Pits closure BPEO review paper submitted to the Dounreay Strategy Board                                  | 31 March 2021                 |
| 7         | Waste Treatment Plant business case submitted to Dounreay Strategy Board                                     | 31 January 2021               |
| 8         | Shaft & Silo: prepare/Peer Review/SWP review PCSR1   | 28 February 2021              |
| 9         | PFR: Alkali Metal Lab removal  | 31 March 2021                 |
| 10        | PFR: removal of Heel Pool<br>- Phase 1   | 24 December 2020              |
|           | - Phase 2  | 30 March 2021                 |
| 11        | ADU Floc Plant Inactive Commissioning – complete production of draft Pre-Commissioning Safety Report (PCmSR) | 30 March 2021                 |
| 12        | Decommissioning strategy and design enabling activities (FCA North and Irradiated Fuel)                      | 31 December 2020              |
| 13        | Participate in NDA-led Project Definition Review Index (PDRI) Reviews of five major projects                 | 30 September 2020             |

**GLOSSARY**

| <b>Abbreviation</b> |  |
|---------------------|--|
| 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   |
| LTP                 | Life Time Plan   |
| mSv                 | milli Sieverts   |
| NDP                 | NaK Disposal Plant   |
| NTWP                | Near Term Work Plan  |
| 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   |
| 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          |