



Office for Nuclear Regulation (ONR) Site Report for Dounreay

Report for period 1 October to 31 December 2018

Foreword

This report is issued as part of ONR's commitment to make information about inspection and regulatory activities relating to the above site available to the public. Reports are distributed to members for the Dounreay Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/llc/>).

Site inspectors from ONR usually attend Dounreay Stakeholder Group meetings where these reports are presented and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should contact ONR.

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1 INSPECTIONS

1.1 Dates of inspection

The ONR site inspectors made inspections on the following dates during the report period 1st October to 31st December 2018:

- 2nd to 4th October
- 13th to 15th November
- 4th to 6th December

2 ROUTINE MATTERS

2.1 Inspections

Inspections are undertaken as part of the process for monitoring compliance with:

- The conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
- The Energy Act 2013
- The Health and Safety at Work Act 1974 (HSWA74); and
- Regulations made under HSWA74, for example the Ionising Radiations Regulations 2017 (IRR17) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring licensee's actions on the site in relation to incidents, operations, maintenance, projects, modifications, safety case changes and any other matters that may affect safety. The licensee is required to make and implement adequate arrangements under the conditions attached to the licence in order to ensure legal compliance. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections at Dounreay related to the following were undertaken:

The management of nuclear matter on the site: We focused on the arrangements in place to manage the irradiated fuel holdings within the reactors, FCA and fuels directorate. We found clear evidence of adequate management systems in place for managing the inventory within each of the areas. In addition, we considered that each of the areas inspected demonstrated a good understanding of their material inventory, with records that clearly track the history of all material received, the material type, condition and quantities, any processing that may have been undertaken, where and how stored and, its eventual consignment where appropriate.

Duly authorised and other suitably qualified and experienced persons and, the control and supervision of operations: These inspections were undertaken in parallel with a specific focus on the project supervisors' role. We examined the corporate level competencies set against the project supervisor role and the associated safety competencies defined in company procedures. We noted the proposal to include a requirement for all project supervisors working in radiological areas to have completed training and formal assessment as a Radiation Protection Supervisor (RPS). We also noted the review ongoing to assess the supervisor training provided by the construction industry training board (CITB) to enhance DSRL's current arrangements. From our inspection of the implementation of the corporate arrangements within each of the operational areas it was clear that Authority to Operate (ATO) holders required facility specific competencies to be met over and above the corporate competencies set for their project supervisors. During our plant visits in each of the operational areas we observed a variety of tasks being performed ranging from high hazard to relatively low. In all cases we observed that there was clarity in understanding regarding the

hazards associated with the task and that the supervisor was clearly in control of the work going on.

In addition we examined the implementation of the corporate arrangements for the provision of duly authorised and other suitably qualified and experienced persons in support of DSRL's emergency arrangements. We noted that each role that makes up the emergency response capability is supported by a corresponding suite of technical competencies against which training and assessment are conducted. We discussed how feedback from exercises is used to review and improve the training provided noting the work ongoing to improve security awareness for key roles within the emergency control centres.

Examination, inspection, maintenance and testing (EIMT): We examined the implementation of the corporate arrangements against nuclear safety significance ventilation systems across site; this inspection was conducted in response to concerns raised previously by SEPA regarding the periodic replacement of HEPA filters. From our discussions we are satisfied that DSRL's arrangements provide adequate assurance regarding the performance of nuclear safety significance ventilation systems. We also examined the current arrangements by which DSRL is assured that all structures, systems and equipment necessary for the provision of an adequate emergency response capability remain fit for purpose. From our examination of the testing and maintenance records of a sample of key equipment that support the site's emergency arrangements we are satisfied that adequate arrangements are in place by which DSRL can demonstrate the continued performance of its provisions to ensure an adequate response to a site emergency.

Accumulation of radioactive waste: We inspected the arrangements in place to manage the production and accumulation of radioactive waste within the reactors, waste and FCA directorates on site. We found clear evidence of adequate management arrangements in place for the control of waste within each of these operational areas. In addition, we considered that each of the areas inspected demonstrated a good understanding of their waste inventory and requirements, and that the production, segregation and disposal of radioactive waste was appropriately managed.

Leakage and escape of radioactive material and radioactive waste: We focused on the arrangements in place to manage the escape and leakage of radioactive material and radioactive waste within the reactors, FCA and waste directorates. We identified clear evidence of adequate management arrangements in place for the detection, monitoring and reporting of leakage or escape within each of the areas.

In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. However, where improvements were considered necessary, the licensee made satisfactory commitments to address the issues, and the site inspector will monitor progress during future visits. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

2.2 Other work

The site inspectors also undertook a number of other inspection activities not linked directly to compliance against legislation.

The formal review of progress against regulatory issues raised by ONR and any regulatory actions agreed between ONR and DSRL as a result of our interventions on site: We consider that DSRL continues to make good progress against the action plans agreed to address regulatory issues raised during previous inspections on site aimed at making improvements to its arrangements. In addition, DSRL continues to implement improvements to their arrangements as appropriate in response to observations made during our site inspection activities.

The formal review of the DSRL's internal regulation activities: We continue to have good confidence in DSRL's internal regulation capability and consider that the risks identified to senior management from their activities align with ONR's observations.

The site inspectors also held a periodic meeting with safety representatives, to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work.

3 NON-ROUTINE MATTERS

Licensees are required to have arrangements to respond to non-routine matters and events. ONR inspectors judge the adequacy of the licensee's response, including actions taken to implement any necessary improvements. There were no such matters or events of significance to report during the period.

4 REGULATORY ACTIVITY

ONR may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, ONR issues regulatory documents, which either permit an activity or require some form of action to be taken; these are usually collectively termed 'Licence Instruments' (LIs), but can take other forms. In addition, inspectors may take a range of enforcement actions, to include issuing an Enforcement Notice.

ONR issued Licence Instrument 523 for the 'Approval' of DSRL's revised emergency arrangements. This LI was granted under condition 11(3) of Schedule 2 attached to the Nuclear Site Licence for Dounreay and follows the formal assessment of the revised arrangements as required by ONR's procedures.

No other LIs, Enforcement Notices or letters were issued during this period.

5 NEWS FROM ONR

October 2018:

- We welcomed the [publication](#) of the key review of operational safety performance at Torness nuclear power station, published by the International Atomic Energy Agency and the UK government. The report highlights eight areas of good practice at Torness and offers proposals for further improvements, which we fully support.
- Following our decision to prosecute, EDF Energy Nuclear Generation Ltd and Doosan Babcock Ltd pleaded guilty to offences at Hinkley Point B under the Health & Safety at Work etc. Act 1974, section 3(1) and the Work at Height Regulations 2005, Regulation 4(1) respectively. The incident was a conventional health and safety matter, with no radiological risk to workers or the public. [A sentencing date](#) has been set for 1 February 2019 at Taunton Crown Court.

November 2018:

- Following a rigorous procurement process, we appointed six nuclear supply chain organisations to our new [Technical Support Framework \(TSF\)](#). The new TSF, which came in to effect on 1 November 2018, has been established to provide a renewed and modernised framework for procuring technical support. We use this technical support to obtain, for example, expert technical assessments, access to specialist software or modelling, or access to niche skill sets that we do not retain in-house.
- The revised Nuclear Safety Directive introduced a European system of Topical Peer Review in 2017 and every six years thereafter. We played a leading role in

the preparations for the first European ‘Topical Peer Review’ on Ageing Management of Nuclear Power Plants and welcome the publication of the [first peer review report](#) by the European Nuclear Safety Regulator Group. We are pleased that a number of our experts made a valuable contribution to the exercise alongside 16 European countries as well as Norway, Switzerland and Ukraine. The UK report was authored jointly between ourselves, EDF Nuclear Generation Ltd and EDF-NNB GenCo.

- [The Atomic Weapons Establishment \(AWE\) was fined £1 million](#) after admitting offences under Section 2 (1) of the Health and Safety at Work etc. Act (1974). The incident, which occurred on 27 June 2017 was a conventional health and safety matter and there was no radiological risk to workers or the public. The prosecution was the result of our investigation into the incident.
- In conjunction with the Environment Agency, we announced the completion of our [initial high level scrutiny](#) of the UK HPR1000 reactor design.
- We provided NNB Genco (HPC) Ltd (NNB GenCo) with [consent](#) to commence the unit 1 Nuclear Island concrete pour at Hinkley Point C (HPC). We also hosted our third webinar to explain our permissioning role for the Nuclear Island concrete pour at HPC and to provide information on our work to ensure that the new nuclear power station is built to the standards expected in the UK. Amongst others, a number of Site Stakeholder Group members joined the webinar and we received excellent feedback. We are planning further webinars on various topics in 2019. If you would like to find out more, please contact the ONR Communications team at contact@onr.gov.uk
- After 16 years of decommissioning work, Bradwell became the first of the Magnox nuclear power stations to receive our permission to enter into a period of “care and maintenance”.
- The nuclear safeguards regulations which will enable ONR to set up the domestic safeguards regime following Euratom withdrawal, were laid in Parliament. The Government published the details, [alongside its response and the feedback to consultation on the draft regulations on its website.](#)

December 2018:

- [Court proceedings continued](#) in our [prosecution of Sellafield Ltd](#) for offences under Section 2 (1) of the Health and Safety at Work etc. Act (1974).
- Reactor 3 at Hunterston B remains offline after being shut down following a routine inspection into cracks in its graphite core, in March 2018. [Cracking of the graphite bricks in Advanced Gas-cooled Reactors](#) such as Hunterston B is expected as the reactors age. However, the number of cracks found during the inspection of Reactor 3 has led to the licensee, EDF Nuclear Generation Limited, carrying out further inspections of the core. Reactor 4 at Hunterston B was taken offline in October for an inspection of its graphite core. EDF Energy has submitted a safety case for Reactor 4 and is preparing one for Reactor 3. We will assess both safety cases to determine whether the reactors are safe to return to service. Neither reactor may restart without our consent, which we will give only if it is safe to do so.
- The Government published a [Written Ministerial Statement](#) on implementing Geological Disposal, announcing the publication of its [Working With Communities](#) policy and the launch of a consent-based process to find a site to host a Geological Disposal Facility (GDF). While we have no formal role in identifying the site for a

GDF, any future facility will need to meet the high standards of safety and security required of a licensed nuclear site.

- All our latest news is available on our website www.onr.org.uk

6 CONTACT

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