



Office for Nuclear Regulation (ONR) Quarterly Site Report for Dounreay

Report for period 01 January – 31 March 2017

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 quarterly to members for the Dounreay Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/lrc/>).

Site inspectors from ONR usually attend Dounreay Stakeholder Group meetings 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 inspector and other inspectors made inspections on the following dates during the quarter:

16 to 19 January 2017
23 to 26 January 2017
21 to 22 February 2017
1 to 2 March 2017
12 to 16 March 2017

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 1999 (IRR99) 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 of Dounreay covered the following:

Modifications to plant, equipment and safety cases;
Management of operations including control and supervision;
Radioactive waste management;
Ventilation and containment system based inspection;
Unannounced inspection

Modifications to plant, equipment and safety cases

Licence Condition (LC) 22 requires the licensee to have adequate arrangements for the control of modifications to existing plant or processes which might affect safety. The inspector sampled the application of the modification process within the Research Reactor Reprocessing Facility (RRRF) and the Dounreay Cementation Plant (DCP). She examined records which demonstrated that modifications were being appropriately scrutinised and authorised. She also visited the plant to review the physical works planned to enable DCP to encapsulate Prototype Fast Reactor (PFR) raffinate to achieve a passively safe waste form. The safety case supporting this work was under production.

Management of operations including control and supervision

LC26 requires the licensee to ensure that operations that might affect safety are undertaken under the control and supervision of suitably qualified and experienced personnel. The inspectors observed operations being undertaken within the wet area size reduction facility (WASRF) at PFR and the RRRF.

Operators working in air-fed suits were undertaking maintenance activities within the RRRF. The inspector considered that they were being appropriately supported by health physics personnel who provided contamination monitoring and there was active supervision by facility personnel. The inspector also sampled training records which confirmed personnel to be suitably qualified and experienced.

The inspector visited the WASRF and discussed control and supervision with the supervisor whose records he had examined previously. The supervisor was able to demonstrate a good understanding of the important hold points related to WASRF operation. He was also able to explain control and supervision of routine activities, showing evidence of acceptance of work order cards for routine tasks and the supervision of those tasks completion.

Radioactive waste management

LC 32 requires that the licensee has adequate arrangements for minimising radioactive waste production and that it appropriately manages how it is accumulated on site. Characterisation of a cell within the RRRF prior to its decommissioning had identified that there was residual liquid intermediate level waste (ILW) within the cell tank. The facility had identified a means of transferring the liquid by an engineered route to ensure that it would be managed within an identified waste stream. The DCP modification discussed above is to encapsulate liquid ILW into a passively safe form for long term storage and it meets ONR requirements.

Ventilation and containment system based inspection

The inspector carried out an inspection of the implementation of the safety case for the Fast Reactor Reprocessing Facility, focussing largely on containment, ventilation and the ability to detect a release. The inspection was against the requirements of LC 23 (operating rules), LC 24 (operating instructions), LC 10 (training), LC 27 (safety mechanisms, devices and circuits), LC 28 (examination, inspection, maintenance and testing) and LC 34 (leakage and escape). He considered that the safety case was being implemented as intended.

Unannounced inspection

ONR periodically undertakes unannounced inspections on sites. The inspector chose to look at the implementation of arrangements made under LC11 (emergency arrangements). He discussed with the shift manager his responsibilities with respect to the licensee's LC 11 arrangements. The shift manager demonstrated that he was sufficiently aware of activity on site during silent hours and that he could take measures to protect affected persons in the event of an incident. He explained that his role in the event of an accident or emergency would be to set up the site incident control centre and initiate the call-out to emergency scheme members. The inspector also spoke to the Liquor Storage Facility shift supervisor. The shift team carry out routine surveillance patrols and monitor the site alarm systems during silent hours. He saw operating instructions for the various patrols. The shift team therefore plays a key role in the detection of an incident on site.

2.2 Annual Review of Safety and Security

The Superintending Inspector visited site to attend the Annual Review of Safety and Security accompanied by other site inspectors. The meeting was chaired by the DSRL Managing Director and included members of his Executive Team and other senior members of staff. Safety Representatives also provided their view of safety performance. It was a constructive meeting that focused on both what went well and areas for improvement.

2.3 Visit by Deputy Chief Inspector

The Deputy Chief Inspector visited site to see progress being made with hazard reduction. She visited a number of facilities and spoke with a cross section of personnel.

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 matters to note 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 issue Enforcement Notices to secure improvements to safety.

No LIs or Enforcement Notices were issued during the period.

Reports detailing regulatory decisions can be found on the ONR website at <http://www.onr.org.uk/pars/>.

5 NEWS FROM ONR

New reactors update:

- ONR received a request from Government to begin the Generic Design Assessment (GDA) process for the UK HPR1000 in January. The reactor is now in Step 1 of the GDA process.
- On 30 March, ONR issued Design Acceptance Confirmation for the AP1000® nuclear reactor, designed by Westinghouse. The regulators required 51 GDA issues to be resolved before confirming suitability of the design.
- ONR granted its first consent for the start of construction at Hinkley Point C licensed site. The consent covers the placement of the structural concrete for the first nuclear safety-related structure at the site.
- On 31 March, Horizon Nuclear Power submitted its application for a nuclear site licence to build and operate two UK Advanced Boiling Water Reactors at Wylfa Newydd on Anglesey.

Quarterly statement of incidents

ONR published its quarterly statement of incidents at civil nuclear sites reporting on the period October-December 2016. There was one incident which met ministerial reportable criteria at Dounreay involving contamination of workers' clothing. There was no detectable intake of radioactive material by any of the people involved in the incident.

6 CONTACTS

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