



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

Report for period 01 April – 30 June 2015

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.

TABLE OF CONTENTS

| | | |
|---|---------------------------|---|
| 1 | INSPECTIONS | 3 |
| 2 | ROUTINE MATTERS..... | 3 |
| 3 | NON-ROUTINE MATTERS..... | 5 |
| 4 | REGULATORY ACTIVITY | 5 |
| 5 | NEWS FROM ONR..... | 6 |
| 6 | CONTACTS..... | 7 |

1 INSPECTIONS

1.1 Dates of inspection

The ONR site inspector and other inspectors made inspections on the following dates during the quarter:

31 March – 2 April 2015
13 April – 16 April 2015
12 May – 13 May 2015
18 May – 21 May 2015
15 June – 18 June 2015
24 June – 25 June 2015

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:

Management of operations including control and supervision;
Staff training, qualifications and experience;
Modifications to plant, equipment and safety cases;
Emergency preparedness;
Incidents on the site;
Radiological protection;
Organisational changes.

Modifications to plant equipment and safety cases

The inspection focussed on the modification for sealing tanks 3 and 4 in the PFR sodium tank farm. DSRL require ONR's permission to carry out work at the tank farm until the requirements of the Improvement Notice there (see below) have been satisfied, and this inspection informed that permission. Overall the inspector considered compliance with Licence Condition 22 (Modification or experiment on existing plant) as it relates to the implementation of this modification to be good. He also considered that the work had been adequately assessed with regard to risk and hazard, was being managed well and will finish with the tanks in a safer, sealed state. Any subsequent work to clean the tanks will be subject to separate consideration.

Incidents on the site

The inspector reviewed the status of findings from DSRL's recent formal investigations of events and associated Action Review Meetings. There was an apparent trend over recent months of an increase in the number of positive biological monitoring results being reported. This could be an indication of an intake of radioactive material but the results have not been confirmed by repeat sampling and analysis and are therefore considered anomalous. DSRL was investigating a number of avenues as to the cause of the anomalous results. The inspector considered that it was addressing the matter appropriately. The outcome of the DSRL investigations was followed up by an ONR radiological protection specialist (see radiological protection section below).

Organisational changes

The inspector considered the licensee's proposed changes to the Reactors Directorate organisation against the principles contained in ONR's technical assessment guide for organisational capability and the licensee's own arrangements. He concluded that the reactors management of change submission was a robust demonstration of compliance with the licensee's procedures, which are themselves consistent with ONR's technical assessment guidance

Level 1 demonstration of emergency arrangements

ONR inspectors observed Dounreay Level 1 (that is, site based) demonstration exercise codenamed Delta 51. The scenario postulated a significant fire within the Dounreay Fast Reactor (DFR) Ion Exchange Plant with the potential to lead to an off-site release of radioactive material and to casualties. We observed activities at various locations on site.

ONR concluded that Delta 51 had been an adequate demonstration of Dounreay's emergency arrangements. It included a successful demonstration of the resilience of the Fire Service both in terms of personnel recalled to duty to staff a second fully equipped fire appliance and in the attendance of the Scottish Fire & Rescue Service. Our findings included both good points and learning opportunities and have been provided to DSRL by letter.

Management of operations including control and supervision

ONR inspectors discussed with process owners and others, DSRL's procedure for managing competence of staff including that required for control and supervision of work. This procedure forms DSRL arrangements made under Licence Condition 12 (Duly Authorised and other Suitably Qualified and Experienced Persons). In addition Licence Condition 26 (Control and Supervision) requires that suitably qualified and experienced persons are appointed to control and supervise operations which may affect safety; DSRL defines operations which may affect safety as, broadly, those operations which require a safety case. The inspectors considered that the arrangements allow DSRL to demonstrate the competence of staff and enable it to demonstrate that control and supervision of its operations that may affect safety is undertaken by suitably qualified and experienced persons.

ONR inspectors also inspected the implementation of the arrangements within DFR, Prototype Fast Reactor (PFR), cementation plant and a waste processing plant. They sampled training records and spoke with members of staff about how they assured themselves that personnel were competent. The inspectors concluded that there was an adequate standard of compliance with the arrangements and that control and supervision was being undertaken by suitably qualified and experienced personnel.

Radiological Protection

An ONR specialist inspector followed up the recent anomalous positive biological monitoring results (as noted above) under the Ionising Radiations Regulations. The inspector considered that a robust review of biological sampling and analysis had been undertaken that had led to improved procedures and training. The anomalous results are considered to be a statistical feature of setting a low internal reporting level.

PFR Tank Farm Improvement Notice

ONR has previously reported that it served an Improvement Notice in November 2014 as a result of the findings of its investigation into the fire at PFR sodium tank farm. DSRL developed proposals to discharge the Improvement Notice and ONR has continued to engage with DSRL during this quarter on the implementation of the proposed improvements.

DSRL has made significant changes to the way alkali metals work is planned and delivered, based not just on ONR's Improvement Notice but also on its own investigation and review of past experience. It has also given due thought to how the changes can be sustained in the long term and their applicability to the site wide improvement programme. The ONR inspector spoke to a cross-section of staff and was content that there is a common understanding of the way in which work should be planned and carried out. Overall he was satisfied that the licensee has made the necessary improvements, as required by the Notice, to comply with the Management of Health and Safety at Work Regulations 1999.

2.2 Other work

ONR's Acting Chief Executive visited Dounreay in June as part of his engagement strategy. He found the visit very informative and was able to gain insight into the breadth of activities being undertaken on the site.

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 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.

Table 1
Licence Instruments and Enforcement Notices Issued by ONR during this period

| Date | Type | Ref No | Description |
|------|------|--------|-------------|
| | | | |
| | | | |
| | | | |

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

5 NEWS FROM ONR

ONR published its [Annual Report and Accounts for 2014/15](#) on 29 June. The report details key developments during our first year as a public corporation including:

Progress against ONR's Annual Plan 2014/15, including the Chief Nuclear Inspector's annual statement on the safety and security performance of the nuclear industry;

Details of management arrangements and how our resources have been utilised a summary of our governance arrangements;

The financial statements for 2014/15;

Remuneration of non-executive and executive members of the ONR Board;

The Certificate of the Comptroller and Auditor General to the Houses of Parliament, containing an unqualified audit opinion.

Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Quarterly News. The online publication (<http://www.onr.org.uk/onr-quarterly-report.htm>) reports on the key themes and developments in each of ONR's regulatory programmes and provides an update about the ongoing changes at ONR. <http://www.onr.org.uk/index.htm>. For the latest news and updates from ONR visit the website and sign up for our e-bulletin (<http://www.onr.org.uk/ebulletin/index.htm>).

6 CONTACTS

Office for Nuclear Regulation
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

website: www.onr.org.uk

email: ONREnquiries@onr.gsi.gov.uk

This document is issued by the Office for Nuclear Regulation (ONR). For further information about ONR, or to report inconsistencies or inaccuracies in this publication please visit <http://www.onr.org.uk/feedback.htm>.

© Office for Nuclear Regulation, 2015

If you wish to reuse this information visit www.onr.org.uk/copyright for details.

Published MM/YY

For published documents, the electronic copy on the ONR website remains the most current publicly available version and copying or printing renders this document uncontrolled.