



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

Report for period 01 January 2014 to 31 March 2014

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 Site Stakeholder Group (SSG) and are also available on the ONR website (<http://www.onr.org.uk/lrc/>).

Site inspectors from ONR usually attend Dounreay SSG meetings and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should contact ONR.

1 INSPECTIONS

1.1 Dates of inspection

1. The ONR site inspector made inspections on the following dates during the quarter.
2. ONR site and specialist inspectors made inspections on the following dates during the quarter:

13 to 16 January 2014
10 to 14 February 2014
10 to 13 March 2014

2 ROUTINE MATTERS

2.1 Inspections

3. 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).
4. 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.
5. In this period, routine inspections of Dounreay covered the following:
 - Management of operations including control and supervision
 - Modifications to plant, equipment and safety cases
 - Organisational capability
 - Periodic safety review
 - Management systems

2.2 Management of operations including control and supervision

System inspections

6. ONR carried out three 'systems inspections' within the quarter. The facilities inspected were (1) a radioactive waste management facility in the Fuel Cycle Area (FCA) and the Shaft and Silo; (2) fuel storage facilities in the FCA; and (3) a redundant decommissioning facility in the FCA.
7. The term 'systems inspections' refers to compliance inspections of a complete safety system. The system selected in both cases was the containment of nuclear matter and radioactive waste. Topics under consideration included the integrity of

containment vessels and structures, ventilation, leakage and escape, the adequacy of control and supervision, and maintenance.

8. The compliance inspections gave confidence that there was adequate implementation of the limits and conditions identified in facility safety cases with respect to the safety systems reviewed. There was evidence that systems were being monitored and maintained as required to ensure safe operation, and maintenance records where sampled were satisfactory. There was adequate control and containment so that nuclear matter cannot leak or otherwise escape. Inspectors also noted that staff were demonstrably SQEP (suitably qualified and experienced) for the roles they undertook, and that operating instructions were properly prepared and implemented.

2.3 Modifications to plant, equipment and safety cases

9. ONR inspections of two facilities within the Fuel Cycle Area for compliance with Licence Condition 22, Modification or experiment on existing plant. Modifications sampled included the replacement of interlock gamma monitors, camera equipment, and the installation of a replacement super-compactor.
10. The inspector saw evidence of effective challenge by the Safety Working Party and there was an auditable trail of close-out of matters raised. There was evidence of assessment by appropriate technical specialists. Categorising of modifications according to safety significance was sampled and found to be in accordance with the DSRL arrangements, and the modifications had been appropriately approved with hold points identified. A plant visit revealed adequate control and supervision of installation work and a clear demarcation between the installation and routine operations.
11. The inspector concluded that both facilities demonstrated an adequate standard of compliance. Safety documentation sampled was satisfactory and plant visits demonstrated that modification work was being adequately controlled and supervised.

2.3 Organisational capability

12. Discussions on organisational capability and the Annual Site Funding Limit (ASFL) continued during the quarter.
13. ONR wrote to DSRL to express concerns on the potential safety implications including the proposed re-scheduling of decommissioning activities. We pointed out that any proposal to defer decommissioning must be justified adequately and risks demonstrated to be as low as reasonably practicable. The letter went on to say that operating experience both in the UK and abroad indicates that deferral of decommissioning may lead to significant degradation to systems, structures and components important to safety, and that the costs of subsequent remediation could be very high when compared with original costs. Ensuring that facilities remain safe and do not degrade to a point where decommissioning is made more difficult and potentially more hazardous during deferral: ONR will need to be satisfied that DSRL has in place appropriate arrangements to ensure an adequate maintenance, inspection and testing regime is in place.
14. DSRL has acknowledged ONR's letter and stated that its management of change process will address and, where appropriate, provide justification in respect of the concerns raised by ONR.

15. In February 2014 ONR received the first of three organisational change proposals linked to ASFL. This first phase concentrated on high-level organisational structures. ONR inspectors sampled the proposal and discussed the outcome with DSRL who provided additional justification. The inspectors concluded that the information provided an adequate framework to address the key regulatory issues raised and that therefore ONR has decided not to subject the proposal to any further examination.
16. ONR is aware of the importance to baseline re-scheduling represented by the forthcoming Phase 2 management of change submission, will focus on the more detailed underpinning to deliver re-scheduling, and will engage further with DSRL on Phase 2 proposals.
17. The ONR report for October to December 2013 stated that ONR had questioned a decision to strengthen one of the site Directorates through internal transfers of staff. In January 2014 DSRL confirmed to ONR that a decision had been made not to pursue this particular organisational change.
18. ONR's intervention on this matter will continue.

2.5 Periodic safety review

19. ONR inspected DSRL's arrangements for compliance with Licence Condition 15, which requires DSRL to make and implement adequate arrangements for the periodic and systematic review and reassessment of safety cases. This included checking that DSRL's practices are consistent wi

2.7 Annual Review of Safety Meeting

24. ONR inspectors participated in the Annual Review of Safety meeting. This comprised a summary of reports reviewing safety performance in the past reporting period, plus a look ahead to the key challenges that lay ahead. The meeting afforded an opportunity to reflect on progress made in 2013 and DSRL's plans for 2014 and beyond.

2.8 Other work

25. ONR inspectors met with safety representatives during the quarter from organisations employed across Dounreay, including DSRL and their contractors. ONR very much values the contribution of safety representatives to nuclear safety at Dounreay.

3 NON-ROUTINE MATTERS

26. 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.
27. Matters and events of particular note during the period were:

DSRL MD decision to stop operations

28. ONR has previously reported to the Dounreay Stakeholder Group on a decision by DSRL to stop, or not to start, all operation, maintenance and modification work on the most safety significant facilities (ie, Category 1 and 2 facilities) at Dounreay. DSRL's action was as a result of an ONR inspection in July which revealed that safety case limits and conditions in respect of a particular facility appeared not to be implemented either through inclusion in operating instructions.
29. Based on inspections completed across the Dounreay site in November 2013, ONR is content that the licensee has taken appropriate action to correct the identified significant shortfalls in the implementation of its facility safety cases. A final inspection is scheduled for April 2014 which has the intention of gathering sufficient evidence to support full closure of the issue.

Failure of foam fire fighting system, FCA radwaste store

30. ONR has previously reported to the Dounreay Stakeholder Group an incident which arose during routine testing of a foam fire fighting system, during which a valve on the duty foam delivery line would not freely operate. On changeover to the standby line, leakage was noted from the lagged pipework.
31. ONR will continue its review of this incident and its implications and will report our findings to the Dounreay Stakeholder Group when all actions have been closed out.

Road traffic collision

32. Last quarter's ONR report to the Dounreay Stakeholder Group referred to an incident that happened when a vehicle reversed into an individual causing personal injury. In February a similar incident occurred, thankfully without causing personal injury. The events call into question the site's management arrangements for workplace transport safety. This topic will be among several considered when representatives of ONR's

conventional health and safety team visits Dounreay in June 2014. The outcome of this will be reported to the Dounreay Stakeholder Group.

PFR Caustic release

33. Last quarter's ONR report to the Dounreay Stakeholder Group referred to an incident within the Prototype Fast Reactor (PFR). Whilst undertaking decommissioning work within the Prototype Fast Reactor (PFR) on tanks containing sodium, operators were exposed to caustic fume, causing short term breathing difficulty and eye irritation.
34. ONR has received from DSRL a letter responding to the concerns that ONR raised last quarter. It is clear that DSRL has responded positively to ONR's concerns. In particular DSRL has emphasised that programme delivery will never take precedence over safety; that every person is expected to have a questioning attitude and take action if they have a concern; and that procedural non-compliance is unacceptable. ONR very much welcomes these statements. ONR inspectors will continue their review of the incident and their findings will be included in the DSG report for April to June 2014.

FCA incident 12 March 2014

35. ONR is aware of a report of an incident in the Maintenance and Decontamination facility within the Fuel Cycle Area. Components were being welded to a tank containing low level waste when smoke was seen coming from inside the tank. Welding ceased, the facility was evacuated, and the site fire brigade extinguished the fumes. DSRL is investigating the incident. ONR is satisfied that there was no harm to personnel and no discharge of radioactive material. ONR will consider the incident and DSRL's investigation during a planned site visit in April and we will report our findings to the DSG.

4 REGULATORY ACTIVITY

36. ONR inspectors, specialist inspectors and HSE inspectors 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 the above regulatory decisions can be found on the ONR website at <http://www.onr.org.uk/pars/>.

5 NEWS FROM ONR

37. 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 ebulletin (<http://www.onr.org.uk/ebulletin/index.htm>).

ONR is changing

38. On 1 April 2014, ONR was established as a Public Corporation under the Energy Act 2013. As a result of our change in legal status, the way that we operate will evolve as we make use of the flexibility that the new status affords us. The **Energy Act 2013** clarifies the legal framework for regulation of GB nuclear sites and the responsibility now rests firmly with ONR.
39. In addition, the legislative changes give ONR the powers to regulate conventional health and safety. This change to legislation will give us the necessary powers to continue to provide efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public.
40. To support the launch of ONR as a Public Corporation, ONR has its own logo which will be used on all documents and other external communication media. Other changes include a new enforcement policy statement, a new website and email addresses, a new Annual Plan 2014/15, new warrants for inspectors, and new ONR branded personal protective equipment.

6 CONTACTS

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