



**Office for Nuclear Regulation (ONR)
Quarterly Site Report for
Devonport Royal Dockyard
(Devonport Royal Dockyard Ltd and
HM Naval Base Devonport)**

Report for period 1 January to 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 sites available to the public. Reports are distributed quarterly to members for the Local Liaison Committee and are also available on the ONR website (<http://www.onr.org.uk/lc/>).

Site inspectors from ONR usually attend Devonport Local Liaison Committee 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 inspectors carried out inspections on the following dates during the quarter:

- 16 – 20 January 2017
- 9 February 2017
- 13 – 17 February 2017
- 22 February 2017
- 13 – 17 March 2017

Some of the inspections were carried out with inspectors from the Ministry of Defence's internal regulatory organisation, the Defence Nuclear Safety Regulator (DNSR) and the Environment Agency (EA).

2 ROUTINE MATTERS

2.1 Inspections at Devonport Royal Dockyard Ltd (DRDL)

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

- the conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
- the provisions of 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. Inspectors seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections of Devonport covered the following:

- examination, maintenance, inspection and testing;
- safety systems, structures and components;
- management of operations including control and supervision;
- staff training, qualifications and experience;
- plant construction and commissioning;
- incidents on the site;
- operating rules and instructions;
- safety management systems;
- modifications to plant, equipment and safety cases;
- radiological protection;
- radioactive waste management;
- organisational changes;
- decommissioning;
- conventional fire safety; and

- industrial safety and meeting safety representatives.

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

2.1.1 Nuclear Safety Improvement Programme (NSIP)

ONR understands that the Nuclear Safety Improvement Programme (NSIP) is the primary means through which DRDL intends to return the site to the routine regulatory attention category. DRDL has maintained overall progress with NSIP against the commitments for 2016/17, but the pace of delivery has been slower than ONR's expectations and further work and commitment is required to ensure its implementation. The NSIP comprises several work streams and is being closely monitored by the DRDL Board and by ONR.

The DRDL Board's response to ONR's concerns continues to be positive and supportive of the delivery of the NSIP. A number of Directors and Senior Managers are being allocated Licence Condition (LC) responsibility / ownership to deliver the necessary improvements to LC compliance. ONR will continue to monitor the progress with NSIP implementation during 2016/17 and into 2017 / 18 via engagement with the relevant LC sponsors and owners.

2.1.2 Site Developments and Future Nuclear Facilities

ONR continues to engage on the project to provide a new defueling capability in the Submarine Refit Complex (SRC), known as 'Future Nuclear Facilities'. This will enable final defueling of Laid-Up Submarines (LUSM).

ONR is progressing with a project related to the new Reactor Access House (RAH) to provide regulatory oversight through established regulatory hold points and through DRDL's compliance with its arrangements for modification to the design of plant during construction (LC20) and commissioning (LC 21).

The next steps in the RAH intervention project include:

- Ongoing reviews of the extant RAH safety case and Inactive Commissioning schedule
- Routine ONR / DNSR / DRDL Regulatory Interface Meetings (RIMs) to resolve / escalate any issues
- ONR monitoring to ensure that DRDL's output from its Learning from Experience (LFE) exercise on the RAH move into 14 Dock is captured and utilised accordingly.

2.1.3 Submarine Refit Complex (SRC)

ONR continues to seek further improvements to the Submarine Refit Complex (SRC) plant safety cases as a result of previous permissioning activities. ONR's expectation is that this will be achieved as part of a wider safety case improvement initiative which commenced in 2016.

DRDL has identified a preferred contractor for the removal of the legacy SRC refuelling crane pedestal and other legacy structures and has identified potential timescales for the start of the demolition. DRDL is proceeding with the planning and design work for crane pedestal removal.

2.1.4 9 Dock

In July 2016 DRDL submitted for ONR assessment the phase 2 safety case for refuelling HMS Vanguard. ONR has completed its assessment of the safety submission and issued an agreement to the refuelling activity during April 2017.

2.1.5 System Based Inspection – Reactor Plant Lifts / 9 Dock Reactor Access House (RAH)

From the evidence examined during this inspection in 9 Dock, ONR considers that DRDL has implemented adequately those claims within the facility safety case that relate to internal impact, Reactor Access House (RAH) crane and reactor compartment lift system. DRDL was able to demonstrate an adequate understanding of the limits and conditions necessary in the interest of safety in respect of the system. We did, however, identify a number of areas for improvement relating to the inconsistency of the implementation of operating instructions and the adequacy of the review processes relating to the Examination, Maintenance, Inspection and Testing (EMIT) and maintenance schedules.

ONR identified a number of areas for improvement in respect of arrangements made under LC24 and LC28. We provided initial feedback to DRDL with respect to our findings, which the licensee acknowledged. ONR will review DRDL's progress in these areas through future routine inspections.

2.1.6 Conventional Fire Inspection

ONR carried out a Conventional Fire inspection of the SRC in order to gain clarity on the proposals to upgrade the fire alarm/detection and emergency lighting systems and review the arrangements for means of escape from the lower levels of the SRC.

The fire alarm / detection system and emergency lighting systems within the SRC are ageing and require extensive ongoing maintenance to ensure their operability. DRDL has made proposals to improve/upgrade/replace these systems, but this work is still in the development phase. ONR is seeking a firm commitment from DRDL to appropriately plan and carry out this work within a reasonable timescale. ONR reviewed the arrangements for means of escape from the lower levels of the SRC in the event of a fire, and these were judged to be adequate.

ONR requires DRDL to improve the fire alarm/detection system and the emergency lighting system in the SRC. DRDL is developing proposals to do this but these need to be appropriately planned, funded and implemented. ONR expects DRDL to provide a programme for this work and will monitor progress against DRDL's plan during its routine inspections for 2017 / 18.

2.1.7 Ionising Radiations Regulations 1999 (IRR99) Compliance Inspection

This intervention was conducted on the licensed nuclear site and consisted of meetings with site personnel and a plant inspection visit to the Nuclear Utilities Building (NUB) in the SRC. ONR found that several of DRDL's operations in radiation protection were consistent with examples of relevant good practice. However, areas for improvement also were noted and brought to the attention of DRDL.

ONR judged the condition and arrangements within the NUB to be in need of improvement in several areas. DRDL is developing an improvement plan which should address our findings. ONR will periodically review progress made with the improvement plans during its routine inspections.

2.1.8 Radioactive Waste Management

Through our recent routine interactions with DRDL, both ONR and the EA have been provided with information on the priorities for the implementation of improvements within the Nuclear

Utilities Building (NUB). The EA and ONR consider the progress in implementing these improvements to be slower than we would expect for such an operationally significant facility.

In the period, ONR and EA wrote jointly to DRDL requesting a schedule for rectification of the current issues identified as the NUB top priorities, a commitment to produce and implement a modern standards safety case for the NUB, and the production of a coherent plan as to how all current and future radioactive waste management requirements will be fulfilled. The regulators also requested that DRDL clarified the position on the future capability of the NUB or alternative waste facilities.

2.2 Inspections at HM Naval Base Devonport

The majority of sites inspected by ONR are licensed under the Nuclear Installations Act 1965 (as amended). HM Naval Base Devonport is not a licensed site although it operates under Authorisation from the Defence Nuclear Safety Regulator (DNSR). The site is regulated by ONR through other legislation as noted below. This report summarises the inspection and regulatory activities associated with HM Naval Base Devonport, which are co-ordinated with inspections by DNSR. Inspections are undertaken as part of the process for monitoring compliance with:

- the Health and Safety at Work etc Act (HSWA) 1974; and
- Regulations made under the HSWA (for example the Ionising Radiations Regulations 1999, the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPPIR) and the Management of Health and Safety at Work Regulations 1999).

There were no inspections undertaken by ONR during the period.

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.

Matters of particular note during the period were:

3.1.1 Non-compliances with Operating Limits and Conditions

The site licence requires DRDL to identify operating limits and conditions (OLCs) in the interests of managing safety, and during 2016, ONR identified an adverse trend from incident notifications made to it by DRDL, where there had been failures to comply with OLCs particularly in relation to the control of dockside cranes. ONR undertook a review and analysis of some of DRDL's own investigation reports and identified some areas where opportunities for improvement still existed. DRDL responded positively to ONR's assessment, proposing a phased plan for improvements to the control measures during crane operations on the licensed site.

ONR wrote to DRDL detailing its expectations regarding the licensee's proposed actions to improve planning, de-confliction, supervision and clarity of dockside operations, and the operating instructions via which it will implement the OLCs. In addition, ONR suggested that implementation of the longer-term preventative actions become subsumed into DRDL's NSIP.

In order to provide clarification of ONR's expectations and to provide DRDL with more detailed advice on OLCs, ONR convened a workshop with responsible DRDL personnel in December 2016. The workshop was successful in providing clarity to DRDL staff on relevant good practice, which should lead to a further enhancement of DRDL's arrangements made under LC 23.

Since the workshop, ONR has engaged with DRDL culminating in a presentation by the licensee of progress on a specific sub set of eleven permanent and two temporary Identified Operating Instructions via which it will implement the OLCs. In April 2017, ONR plans to carry out an LC23 compliance inspection to sample the changes to DRDL's arrangements and implementation of the revised OLCs.

4 REGULATORY ACTIVITY

ONR 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 have been issued during the period.

5 NEWS FROM ONR

New reactors update:

- ONR received a request from Government to begin the Generic Design Assessment 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 civil incidents:

- ONR published its quarterly statement of civil incidents 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.

Regulation Matters magazine

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

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