



**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 October to 31 December 2016

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:

- 3 – 7 October 2016
- 31 October – 4 November 2016
- 17 November 2016
- 22 – 24 November 2016
- 5 – 9 December 2016

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.

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;
- emergency preparedness;
- incidents on the site;
- operating rules and instructions;
- operational records;
- safety management systems;
- modifications to plant, equipment and safety cases;
- radioactive waste management;
- organisational changes;
- decommissioning; 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)

During the period ONR has engaged with DRDL regarding the progress with the NSIP workstreams:

Event management & investigation (Licence Condition (LC) 7): see LC7 compliance inspection below.

Nuclear Safety Capability & Competence (LC10, 12, 36): see LC36 compliance inspection below.

Infrastructure (LC22): see LC22 compliance inspection below.

Work Authorisation & Control (WAC - LC23, 24, 26): The WAC project has been progressively implementing improvements to DRDL's control and supervision of work under LC 26. However, ONR also requires improvements to be made to Operating Limits and Conditions under LC 23 and Operating Instructions under LC 24 and has engaged with DRDL regarding these issues (see sections 2.1.8 and 3.1.1 of this report).

Safety Management Systems: ONR has positively influenced DRDL regarding the prioritisation and pace of delivery of this workstream. DRDL is now actively pursuing the Safety Information component of this workstream.

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 LC responsibility / ownership to deliver the necessary improvements to LC compliance. ONR will continue to monitor the progress with NSIP implementation during 2016/17 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:

- Reviewing the extant RAH safety case and Inactive Commissioning schedule
- A specific routine Regulatory Interface Meeting (RIM) has been established to resolve / escalate any issues
- 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 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 recently assessed tenders for the removal of the SRC crane pedestal and other legacy structures and has identified potential timescales for the start of the demolition.

2.1.4 9 Dock

In July 2016 DRDL submitted for ONR assessment the phase 2 safety case for refuelling HMS Vanguard. ONR is making progress with its assessment of the safety submission and is on course to issue agreement to the refuelling activity by the end of March 2017.

2.1.5 Licence Compliance Inspection – LC7 (Incidents on the site)

The main aim of this planned LC7 compliance inspection was to assess DRDL's progress against the shortfalls detailed in ONR's letters and inspection findings from 2015 and 2016. DRDL has addressed these shortfalls through the Nuclear Safety Improvement Programme (NSIP) via a dedicated LC7 work-stream. DRDL has responded positively to our detailed issues and has made satisfactory progress against the longer-term site-wide actions, although some improvements still need to be implemented. From the evidence obtained during the inspection, ONR believes that DRDL is now in a position to close down this NSIP workstream and move LC7 back into normal business. ONR intends to carry out a follow-up LC7 compliance inspection in late 2017 / 18 to determine that progress with the implementation of improvements has been maintained.

2.1.6 Licence Compliance Inspection – LC17 (Management Systems)

The purpose of this LC17 compliance inspection was to examine aspects of the management system in the following areas:

- Governance of nuclear safety related projects
- Management of nuclear safety related projects
- Control of changes to management systems documentation

ONR judged that the management systems sampled for governance of nuclear safety related projects and control of changes to management systems documentation, are adequate.

2.1.7 Licence Compliance Inspection – LC22 (Modification or experiment on existing plant)

ONR inspected DRDL's arrangements made under LC22 and their implementation. The inspection findings were as follows:

- DRDL has a comprehensive process in place to control modifications to site and these arrangements were appropriately visible to staff.
- DRDL has an adequate level of management oversight of their ongoing site modifications and DRDL is in the process of rationalising the number of current site modifications in progress.
- DRDL was in the process of implementing additional project control tools to enable a greater level of preplanning and management controls into their nuclear infrastructure modification arrangements.
- ONR expects DRDL to implement all of the requirements of the Change Record (CR) process and close out the CR processes in a timely manner once the modification has been implemented on site.

ONR rated DRDL's arrangements to control modifications to existing plant in line with the requirements of LC22 to be adequate, but with one area for improvement as indicated above.

2.1.7 Licence Compliance Inspection – LC23 (Operating Rules)

This LC23 compliance inspection examined the implementation of DRDL's LC23 arrangements for, and implementation of, operating rules to inform progress against an extant regulatory issue. This inspection found that:

- The licensee has not consistently implemented its own arrangements when identifying limits and conditions in the 15 Dock safety case.
- Site personnel understood the importance of operating rules, a general willingness to comply with the associated operating instructions was observed, and relevant information was available at the workplace.
- We found that when difficulties are encountered with maintaining compliance with operating rules, the necessary improvements are not always being implemented in a timely manner.
- Potential shortfalls in how operating rules are defined and implemented within the 15 Dock safety case were identified.

ONR judge that DRDL's approach to the identification and implementation of operating rules is an area for improvement in translating the safety case requirements. The licensee is currently implementing a programme of improvements associated with LC23 which ONR will monitor through routine engagement.

2.1.8 Licence Compliance Inspection – LC27 / 28 (Safety mechanisms, devices and circuits (SMDCs) / Examination, inspection, maintenance and testing (EIM&T))

ONR inspected DRDL's arrangements made under LC 27 / 28 and their implementation. The safety related systems which ONR decided to inspect were the compressed gas and dock-side emergency diesel generator systems. We examined aspects of the safety case, plant maintenance schedules and conducted a follow-up on a diesel generator hose modification following a breakdown.

DRDL is implementing the required improvements to its LC27 arrangements to enhance the links between the safety case and identified safety mechanisms, devices and circuits. ONR will examine the implementation of these enhancements to ensure they align with our expectations. ONR will monitor DRDL progress against the shortfalls as part of routine regulatory engagement.

Based on the evidence gathered during the inspection, ONR judged that DRDL's EIM&T activities align with the safety case requirements and that the licensee's LC28 arrangements and their implementation were adequate. We also found that the control of pressure equipment and the periodicity for examination and testing was well defined. Some opportunities for improvement were identified and shared with the licensee but no significant shortfalls were identified.

2.1.9 Licence Compliance Inspection – LC36 (Organisational capability)

ONR examined the arrangements DRDL has put in place to manage its organisational capability in accordance with the requirements of LC36. This was a further planned inspection, following inspections carried out in 2015, where DRDL's LC36 arrangements were judged to have a number of shortfalls when compared to relevant good practice.

ONR notes the significant progress that DRDL has made since the last inspection and there is now a greater degree of regulatory confidence in DRDL's ability to make the necessary improvements. DRDL intends to move the LC36 improvement project, currently a work-stream of the Nuclear Safety Improvement Programme (NSIP) into normal business. ONR will

seek assurance from DRDL that the organisational capability team is adequately resourced to deliver the required improvements, given the scale of the work remaining and the importance of an enduring solution, and that adequate Board-level governance and oversight is maintained.

ONR examined the nuclear baseline and DRDL demonstrated that it has identified the resource levels needed to carry out day-to-day operational activities. DRDL also understands how its actual resource levels compare to these through the utilisation of the nuclear baseline management tool and associated metrics. During the inspection, ONR found no evidence which would indicate that DRDL did not have adequate human resources to ensure the safe operation of its nuclear activities. However, ONR judged that some further work is required to ensure that all nuclear safety related roles are identified on the baseline. DRDL should also establish and implement succession planning arrangements in a proportionate and targeted manner to ensure that where vulnerabilities are identified, succession plans are in place.

2.1.10 Ionising Radiations Regulations 1999 (IRR99) Compliance Inspection

An ONR specialist radiological protection specialist conducted an inspection of compliance with the IRR99 on the DRDL licensed site and identified several examples of relevant good practice in the following areas:

- Safety walk-down formats produced by the Radiological Safety Compliance Manager are effective in achieving effective outcomes as they include a red/amber/green rating and photos, so are easy to understand at a glance.
- Radiological Protection (RP) innovations by the reactor tooling and training department.
- Health Physics toolbox talks to monitors, ensuring they are up to date on any RP issues or developments.
- The improved radiological work control permit package has increased understanding of As Low As Reasonably Practicable (ALARP) controls and the use of red briefs has improved pre planning of work and reduced conflicts.

Some areas for improvement were identified as follows:

- Conventional safety in the radiochemistry lab.
- Integration of ALARP and consequence assessment between the Health Physics Operations group and the Safety case team to achieve a clear line of sight from the safety case to precautions in a permit.
- Some issues have arisen in the population of the Radiological Risk Assessments which are to be addressed by Health Physics Operations Group. The health physics improvement plan in the Radiological Risk Assessment Principles policy clearly states the areas to be worked on in priority order.

From the areas examined ONR judged overall that the radiological protection arrangements are adequate.

2.1.11 Emergency Planning Area

ONR published a revised Radiation Emergency Preparedness and Public Information Regulations 2001 (REPPPIR) Emergency Planning and Prior information area for the Devonport site in mid-November 2016. The revision of the area is a result of the application of practical and strategic factors as detailed in ONR's technical assessment guide (TAG) for the assessment of REPPPIR submissions. This work has involved engagement with DRDL, HM Naval Base Devonport (HMNB (D)), DNSR, and relevant Local Authorities.

Further details can be found on ONR's website: <http://news.onr.org.uk/2016/11/devonport-emergency-planning-areas/>

2.1.12 Radioactive Waste Management

ONR and EA held their quarterly waste meeting with DRDL and HMNB (D) in October. DRDL has disposed of its first legacy sealed source and is investigating disposal routes for other sealed sources. DRDL is developing a Radioactive Waste Management (RWM) team which will incorporate the former Disposal and Recycling of Redundant Equipment Team (DRRET) capability and recruit some new personnel. DRDL explained that the radwaste activities schedule will be owned and developed by a new project manager. ONR welcomed this new organisational approach which is aimed at a more integrated approach to radioactive waste management.

The updated Integrated Waste Strategy has been drafted, and regulators have commented. DRDL met with its regulators to discuss DRDL's Through Life Management Plan (TLMP) and how this supports waste management facilities and activities. Long-term requirements for the Nuclear Utilities Building (NUB) have not yet been incorporated into the plan, but will be in due course.

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.

During the period, ONR assessed DRDL's progress with the improvement programme through a review meeting and associated compliance inspection. 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.

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

External Stakeholder events

On 1 November 2016, ONR held its Industry Conference in London, which brought together senior leaders from across the nuclear sector. We were pleased to welcome Baroness Neville-Rolfe DBE CMG, Minister of State at the Department for Business, Energy and Industrial Strategy (BEIS) to this year's conference who delivered the keynote speech. A special edition of Regulation matters has been published following the conference, which provides a summary of how the day unfolded.

As part of our commitment to engage regularly with all our stakeholder groups, we were pleased to welcome 17 representatives from a number of organisations to our ONR / NGO forum on 30 November in London. The event provided an opportunity for NGO representatives to meet with a number of senior ONR leaders, including our Chief Executive and Chief Nuclear Inspector, to discuss a number of priority issues.

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>.

6 CONTACTS

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