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 2015

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/llc/).

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:

- 19 – 22 January 2015
- 27 – 29 January 2015
- 9 – 12 February 2015
- 25 – 26 February 2015
- 9 – 12, 16 March 2015

The Superintending Inspector for Naval Nuclear Propulsion Plant Inspection visited the site on the following dates during the quarter:

- 25 - 26 February 2015

The Deputy Chief Inspector for the Defence Programme visited the site on the following dates during the quarter:

- 25 - 26 February 2015

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 monitoring 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;
- radiological protection;

- operating rules and instructions;
- modifications to plant, equipment and safety cases;
- radioactive waste management;
- organisational changes;
- periodic safety review;
- decommissioning;
- 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 Organisational Capability

Under the conditions of the nuclear site licence, DRDL is required to maintain adequate resources to ensure the safe operation of the site and also have arrangements to control any change to its organisational structure (under Licence Condition (LC) 36).

In the reporting period, DRDL has made further progress in refining their understanding of what is needed to achieve sustained compliance with LC36 as part of the development of its Nuclear Safety Improvement Programme (NSIP). ONR has continued its regular engagement with DRDL, monitoring progress against the objectives stated in the improved Nuclear Baseline workstream of the NSIP. DRDL intends to have many of the arrangements necessary to derive and manage the organisational baseline in place for June 2015, along with the production of a baseline to demonstrate adequate organisational capability within a specific pilot area.

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 defueling of laid up submarines currently on the Devonport site, together with other submarines when they are taken out of service. The project includes a replacement Reactor Access House (RAH) for removing fuel from the reactor, an updated operational safety case and other safety improvements.

Assembly of the 14 Dock RAH is progressing off the DRDL licensed site within the Frigate Refit Complex at 5 Dock. ONR continues to engage with DRDL on the 14 Dock RAH project ensuring regulatory control through permissioning of the established regulatory hold-points and through DRDL’s compliance with its arrangements for the construction and installation of new plant (LC19) and modification to the design of plant during construction (LC20).

DRDL is carrying out a range of design and safety case activities for the 14 Dock RAH up to the next regulatory hold-point, which take account of ONR’s requirements for installation off the licensed site. DRDL is working to a programme set out in its action plan for the project to address all of these requirements. DRDL is progressing with the manufacture of equipment for the 14 Dock RAH and installation at Devonport. Based on inspections and the information provided at bi-monthly meetings, ONR and DNSR are confident that DRDL is implementing adequate arrangements for the 14 Dock RAH manufacture and installation.

During the period, ONR issued a Licence Instrument under LC20 granting permission for inactive commissioning of the tooling that will be used during defueling (see Section 4). This commissioning will be carried out in one of DRDL’s on-site test facilities. ONR is also

currently assessing DRDL's request for a Category A Change Request for installation of a modification to the RAH crane.

2.1.3 Submarine Refit Complex (SRC) Safety Case

DRDL has submitted a Category A Change Request (CR) to implement the modern standards approach in 14 Dock, following the completion of a gap analysis against PSC 220 and the implementation in 15 Dock. The CR has been submitted to ONR requesting permission to conduct the next docking in 14 Dock. ONR is assessing the safety case documentation supporting the permission and a permissioning decision will be made during the next quarter.

2.1.4 9 Dock Safety Case

ONR continues to monitor the development of the revised safety case for the forthcoming deep maintenance period of HMS Vanguard in the 9 Dock facility. DRDL believes that the option that has been chosen will deliver a new modern standards safety case and considers that it will provide the greatest safety benefits. DRDL has presented an overview of the case and ONR will attend a series of early engagement meetings to enable a strategy for assessing the case effectively to be developed by the regulator.

2.1.5 Emergency preparedness

Where there is a potential for off-site release of radioactivity within the UK that would require implementation of countermeasures, emergency planning areas are designated. ONR determines the area based on two principles:

- A technical assessment of the area likely to be affected by a radiation emergency as defined in the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPIR);
- An assessment of the practical and strategic implications of implementing countermeasures and aiding those members of the public who are likely to be affected by a radiation emergency. This assessment involves consultation with local authorities and includes local demographic and geographical considerations.

ONR now uses the term REPPIR off-site Emergency Planning Area (EPA) to identify the area around a nuclear site where the local authority is required to have a plan for protecting the public in the event of an off-site emergency (Detailed Emergency Planning Zone (DEPZ) has previously been used to define different areas by different stakeholders). The size of the EPA differs site by site in the UK, with due consideration given to individual factors associated with each site.

Following the publication of ONR's revised principles for EPA determination in January 2014, ONR commenced revision of the off-site EPAs to defined maps. The Devonport EPA is currently in the process of being re-assessed by ONR. ONR has engaged with DRDL, HM Naval Base Devonport (HMNB(D)), DNSR, Plymouth City Council, and Cornwall County Council regarding the determination of the Devonport EPA and shared its initial proposals. ONR will continue to engage with the key stakeholders as the EPA determination process progresses.

2.1.6 Delta and Echo Buoys Emergency Exercise

During the period, ONR observed Delta and Echo Buoys Emergency Exercise 2015 which was a demonstration of the DRDL nuclear licensed site and HMNB(D) emergency arrangements as required under licence and authorisation condition 11. The demonstration was assessed by a joint regulatory team consisting of ONR and DNSR inspectors.

The exercise scenario was based on the reference accident event on a fictional Trafalgar Class submarine moored at Delta Buoy located in the Plymouth Sound. ONR and DNSR judged the exercise to be an adequate demonstration of the emergency arrangements overall including the specific areas of water-borne monitoring and the operation of the emergency monitoring vehicles which has significantly improved since the last exercise in October 2014.

2.1.7 Licence Compliance Inspection – LC13 Nuclear Safety Committee

ONR and DNSR inspected the arrangements made under LC13 and their implementation through observing a Nuclear Safety Committee (NSC) meeting at DRDL. The licensee's terms of reference and arrangements for urgent safety proposals have been approved by ONR and meet the requirements of LC13 and match the expectations set out in ONR's Technical Inspection Guidance. ONR judged that the NSC is operating in accordance with its terms of reference, is providing challenge and clear advice, and there is a competent secretariat and good attendance by independent members.

2.1.8 Licence Compliance Inspection – LC22 Modification or experiment on existing plant

During the period, ONR and DNSR carried out a planned Licence Condition 22 compliance inspection. The inspection included a desktop review of the documented arrangements and examination of a sample of modifications followed by interviews with users of the arrangements. ONR and DNSR concluded that the fundamental requirements of LC22 were met. However there are some procedural shortfalls in terms of safety categorisation and failure to achieve timely close-out of implemented modifications. Actions have been agreed with the licensee to address the issues identified and progress will be monitored through routine regulatory business.

2.1.9 Systems Based Inspection

During this period, ONR led a joint System Based Inspection (SBI) supported by DNSR, of the SRC and 9 Dock dockside crane systems. The purpose of the SBI is to confirm that the system performance is able to fulfil its safety function as defined in the safety case, through examining the implementation of a series of licence conditions. During this SBI inspection, the Regulators examined DRDL's implementation of their management arrangements for ensuring that the SRC and 9 Dock crane systems adequately fulfil the requirements of the respective safety cases.

ONR and DNSR concluded, based upon evidence sampled during this inspection, that the requirements of the safety case with regard to nuclear dockside cranes have been adequately implemented at the DRDL Licensed Site. However, areas for improvement were identified related to training, and control of documentation, particularly that associated with Examination, Inspection, Maintenance and Testing. ONR has raised a regulatory issue requiring the licensee to address these areas for improvement and progress will be monitored through routine regulatory business.

2.1.10 Radioactive Waste Management

ONR continues to hold regular quarterly meetings with DRDL and HM Naval Base Devonport to monitor progress with a suite of projects and ongoing work relevant to the management of radioactive wastes and decommissioning at Devonport. Good progress is being made to secure suitable disposal routes and minimise waste accumulation at the site. The last quarterly waste meeting noted that good progress in waste management is still evident. We were informed that the Disposal and Recycling of Redundant Equipment contract will cease end of March 2015. In order to maintain this capability the licensee intends to establish a

small core team but as the potential impact of this change is not yet apparent, ONR will monitor the ability of the licensee to control and manage radioactive waste effectively.

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 (REPPIR) and the Management of Health and Safety at Work Regulations 1999).

2.3 Other work

ONR's Deputy Chief Inspector for the Defence Programme and Superintending Inspector for ONR's Propulsion sub programme visited the site on 25th and 26th February to attend a special Level 1 Regulatory meeting with the DRDL senior management team and members of Babcock's Naval Marine Board.

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 and events of particular note during the period were:

3.1.1 Improvement Notice

In December 2014 ONR served an Improvement Notice (IN) on DRDL following an investigation which highlighted shortfalls in the health and safety arrangements for working with ionising radiations at Devonport Royal Dockyard.

DRDL wrote to ONR in March 2015 making a commitment to resolving the shortfalls and describing the actions which will be taken to achieve this. ONR are broadly satisfied that the planned improvements will be sufficient to close the improvement notice and will bring the arrangements up to an appropriate standard. ONR will monitor progress until the notice is closed.

3.1.2 Incidents on the site

During the refill of the Primary Plant on HMS Vengeance in 9 Dock, one of the requirements of an Identified Operating Instruction (IOI) was not fulfilled. Identified operating instructions are derived from the plant safety case and are the means of ensuring compliance with the operating rules in the safety case.

The licensee informed ONR, took appropriate action to make the work safe, and convened an investigation to identify the root causes of the event. Following initial enquiries, ONR judged

that DRDL's recovery actions were appropriate and that there was no significant impact on nuclear safety. The event is being dealt with in accordance with the licensee's arrangements, but ONR is monitoring DRDL's response and will follow-up the event as part of normal regulatory business.

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. The following LIs have been issued during the period:

Table 1

Licence Instruments and Enforcement Notices Issued by ONR during this period

Date	Type	Ref No	Description
06/03/15	LI	558	Agreement to implement modification NED-MNC-240-13424, 14 Dock Butterley Crane safety justification for the shortfall in crane rail withstand, solely for the purpose of docking Tireless in 14 Dock
25/03/15	LI	556	Agreement to undertake RAH Defueling Phase 1 Inactive Commissioning of the 14 Dock RAH tooling and equipment in the NEMSFAC

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

5 NEWS FROM ONR

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).

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

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