



**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 2014

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:

- 14 – 16 January 2014
- 20 – 23 January 2014
- 10 – 14 February 2014
- 10 – 13 March 2014
- 25 – 27 March 2014

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

- 21 – 22 January 2014

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 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:

- restrictions on nuclear matter on site and consignment of nuclear matter;
- examination, maintenance, inspection and testing;
- safety systems, structures and components;
- management of operations including control and supervision;
- staff training, qualifications and experience;
- new plant construction and commissioning;
- emergency preparedness;
- safety documentation and periodic review
- incidents on the site;
- radiological protection;
- operating rules and instructions

- radioactive waste management;
- quality assurance and records;
- organisational changes;
- decommissioning;
- industrial safety.

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

2.1.1 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 (FRC) at 5 Dock. ONR continue to engage with DRDL on the 14 Dock RAH project ensuring regulatory control through permissioning of the established 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).

During this period Inspectors from HSE's Construction Division carried out an inspection of the planning and performance of the construction of the 14 Dock RAH in the FRC. The Inspectors found no significant concerns requiring immediate action although they identified some potential areas for further improvements.

2.1.2 Submarine Refit Complex (SRC) Safety Case

ONR previously granted permission under the new SRC safety case (PSC 220) solely for the purpose of a single docking in 15 Dock. This safety case delivered many benefits through the modern standards approach. However, ONR considers that there are further improvements still to be implemented and recommendations from assessments to be resolved before ONR permissions the next use of the safety case. During this period DRDL and ONR / DNSR have both undertaken lessons learned exercises to identify recommendations and improvements that can be made to the processes for delivering safety cases and permissioning the associated activities. ONR / DNSR have provided details of their recommendations to DRDL in writing. Whilst these are being resolved the SRC facility safety case will remain a regulatory intervention focus for ONR with tight regulatory control of activities remaining in place through the continued use of the established regulatory hold points.

2.1.3 Fire Inspection

ONR participated in a DNSR-led inspection of the adequacy of DRDL's arrangements to manage and prevent fires in a submarine in 15 Dock under the new PSC 220 safety case. ONR's SRC Site Inspector and Internal Hazards Specialist Inspector focussed on the implementation of Safety Functional Requirements (SFRs), Identified Operating Instructions (IOIs), training of personnel and maintenance arrangements. The intervention commenced with discussions where DRDL explained the PSC 220 claims, followed by a physical inspection of the arrangements in place. In conclusion, the joint ONR and DNSR inspection of the first implementation of the PSC 220 fire aspects did not identify any areas of concern requiring regulatory action although further engagement was expected regarding the lessons

learned from PSC220 assessment and implementation (see section above). DRDL's arrangements for the control of flammable inventory, fire protection and response were judged to be adequate and its personnel demonstrated a good understanding of the PSC 220 IOI and SFR requirements.

2.1.4 9 Dock Safety Case

During this period the MoD announced the decision to refuel HMS Vanguard during its forthcoming deep maintenance period in the 9 Dock facility. This decision will likely require some changes to be made to the planned revision to the facility safety case and also the periodic review of safety for certain facilities that were not intended to be used during future maintenance. ONR and DNSR will continue to engage in regular discussion with the project team developing the safety case and will review the developing regulatory assessment strategy to set out which aspects of the case regulators wish to examine in detail.

2.1.5 Radioactive Waste Management

During this period two teams consisting of ONR, Environment Agency and DNSR inspectors undertook an inspection of DRDL's and Her Majesty's Naval Base HMNB (D) arrangements for tracking and accounting for radioactive materials and waste (restrictions and consignment of nuclear matter on site) including the new barcode system. The teams visited a number of areas across the site including the Submarine Refit Complex (SRC) / Nuclear Utilities Building (NUB), 9 Dock including Primary Circuit Decontamination (PCD) / Nuclear Equipment and Maintenance Support Facility (NEMSFAC) and 8 and 9 Wharves.

Implementation of the barcode scanner system and associated radioactive materials data base was demonstrated. DRDL has made significant progress against the regulatory recommendations from the previous inspection which identified the need to improve the tracking and accounting of radioactive material and waste. The new tracking system has introduced a number of operational benefits including the ability to track down items easily and quickly establish the inventory of an area. During the inspection of there was clear evidence of the tracking and accounting system being implemented throughout the facilities. The Regulators also inspected DRDL's documentation for consignment of waste and radioactive materials off site, and this was also found to be in order and well controlled. The inspection found that HMNB (D) maintains logs of solid and liquid waste / material from the submarines and uses a manual system to control the transfers and storage. The teams examined various logs, waste identification tracking registers and movement records which were found to be in order. Whilst HMNB(D) was not using the barcode system in these areas, the manual system was judged to provide adequate control of waste, radioactive materials and sealed sources.

Overall, ONR, DNSR, and EA judged that DRDL has made significant improvements to its management of radioactive materials and waste which includes extensive use of the barcode system. The team found evidence of good control of waste / radioactive materials and observed good housekeeping in general. The inspection found evidence of significant improvements in the control and consignment of nuclear materials. Whilst the barcode system is being adopted at a differing pace by facility teams across site, the system appears to be functioning adequately. One of the ONR / DNSR / EA findings was that DRDL should consider the implications of the recent Chacon event for waste / materials transfers and storage (see section below). Some minor teething problems are still apparent; however the regulator recognises the benefits of the barcode system and encourages a consistent cross-site implementation of the system by DRDL and HMNB(D).

Whilst there have been improvements in levels and organisation of waste / materials storage, DRDL also accepted a number of actions to take where areas for further improvement had been identified. ONR, DNSR, and EA intend to follow these up through normal planned site inspection visits.

2.1.6 System/ Structures Based Inspection

System and structures based inspections are undertaken as part of ONR's compliance inspection programme. The aim of these inspections is to review the material condition of

safety related systems, plant and equipment and to ensure that they are being operated and maintained adequately and in accordance with the safety case requirements. During this period a team of ONR and DNSR inspectors undertook an inspection of the Salt Water Cooling System (SWCS) of the Submarine Refit Complex. The SWCS provides support to the submarine when it is docked in the SRC for maintenance. The inspection found the SWCS to meet the requirements of the safety case and that it was adequately justified for its current campaign. However a number of areas for improvement were also identified and ONR judged that further validation should be provided in order to support the next planned use of the system. ONR intends to follow up the findings of the inspection in writing and seek the improvements identified.

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).

2.2.1 Naval Base Radiological Protection and Waste Management

During this period DNSR led a team consisting of DNSR, EA and ONR in an inspection of the Naval Base Authorisation Conditions (ACs) for radiological protection and radioactive material/waste management arrangements (including requirements of Ionising Radiations Regulations 1999). Overall the inspection found adequate compliance arrangements for the ACs inspected.

2.3 Other work

The Superintending Inspector of the propulsion sub programme visited the site on 21st to 22nd January to attend a regulatory interface meeting with the DRDL senior management team and Naval Base representatives.

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

During this period DRDL has complied with the Improvement Notice, served in July 2013, for not being fully compliant with the Management of Health and Safety at Work Regulations and Licence Condition 24 (Operating Instructions). ONR served the notice following regulatory compliance inspection findings and a series of incidents at the site which identified weaknesses in DRDL's arrangements. The notice required DRDL to make the necessary improvements by 31st March 2014. Following the issue of the notice DRDL responded positively and established a multi-disciplinary team and dedicated working group to manage the delivery of improvements. The team represented key parts of the organisation ranging from operational staff, industrial work force, technical specialists and senior management.

Adopting industry good practice, DRDL identified the root causes of problems and formulated four key areas of improvement with a particular focus on the safety of nuclear operations. These areas covered aspects such as providing improved operating instruction guidance, enhancing safety briefings, promoting leadership and safety management skills, reinforcing roles and responsibilities, establishing an assurance framework for operations, improving communications and workforce engagement and also strengthening the organisational structure.

Following the issue of the notice ONR has maintained close engagement with DRDL to ensure that improvements were progressed in line with the regulatory expectations. During this period ONR has seen evidence that the improvement actions have targeted those persons directly controlling and supervising operations to ensure they are familiar with their responsibilities as well as improving the clarity and ownership of associated operating rules and instructions for ensuring safety. As required by ONR's regulatory process a formal follow up visit was also undertaken ahead of the close out date in March 2014 to check compliance with the notice. This visit was undertaken by a team of inspectors who had been involved in the issue of the original notice. The inspection team engaged with a wide range of staff from operational level through to senior management and executives. The inspection found evidence that improvements had been made in the areas identified by the notice. It was also noted that there was a general improvement in both nuclear safety awareness and more positive behaviours which should provide an enhanced defence in depth across the organisation.

In addition to the improvements made, DRDL has also taken the opportunity to consider further nuclear safety objectives aimed at sustaining compliance and delivering improvements in other areas. DRDL has commitment to delivery of these nuclear safety benefits through a strategic safety improvement plan. ONR intend to engage with DRDL and monitor the improvement programme to ensure progress and delivery of further improvements.

From the evidence gathered, which includes documentation, meetings and discussions with staff from management level through to operational and supervisory levels and also evidence from DRDL's own internal regulatory function, ONR is satisfied that DRDL has complied with the notice.

3.1.2 Incidents on the site

During this period DRDL notified ONR of two events which met the criteria for reporting under the INF1 process.

The first event occurred in January and involved the movement of an approved temporary radioactive store (Chacon) for HMS Trenchant. The event was categorised as radioactive material or waste inadvertently transported off the licensed site although the store remained on the Devonport site throughout the event. There were no radiological consequences from the event however DRDL has instigated a full investigation into the incident which is initially considered to involve loss of control. ONR is currently satisfied with the immediate remedial action taken by the Licensee and is liaising with DNSR and EA on this event. ONR has reviewed the current arrangements for tracking and accounting for radioactive materials and wastes across the site (including barcode scanning system) during the inspection in March (see above). ONR will consider the findings and recommendations of the DRDL investigation when complete and liaise with the EA regarding any further regulatory action.

The second event occurred in March and involved HMS ARGYLL which was berthed at 5 Wharf (off the DRDL Licensed Site) in Devonport Naval Base. The incident involved routine maintenance activities which led to the inadvertent ejection of a dummy torpedo (not live) which came to rest at the site boundary fence. There were no nuclear, radiological or conventional safety consequences other than minor damage to the fence. The Commander of the Base (NBC) issued an immediate embargo on all weapons testing and secured the damaged fence. MoD is undertaking an investigation and restrictions have been put in place during this period. The MoD have committed to full transparency of the investigation with the site. ONR is liaising with DNSR who will be taking the lead with respect to considering

safety management arrangements used by NBC to safeguard both the Naval Base and the DRDL site. ONR will liaise with DNSR to determine whether any further regulatory action is needed.

4 REGULATORY ACTIVITY

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.

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

5.1 ONR is changing

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.

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.

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.

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

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