



**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 July to 30 September 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/llic/>).

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 – 18 July 2014
- 11 – 15 August 2014
- 8 – 12 September 2014
- 16 – 18 September 2014

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

- 15 - 16 July 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 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;
- new plant construction and commissioning;
- emergency preparedness;
- safety documentation and periodic review
- incidents on the site;
- radiological protection;
- operating rules and instructions
- modifications to plant, equipment and safety cases,
- radioactive waste management;

- quality assurance and records;
- organisational changes;
- decommissioning;
- control of property transactions
- 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. 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 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 36).

During the previous period, DRDL replied to the points raised in ONR's LC36 letters and to ONR's inspection findings which focussed on the capability management arrangements including the nuclear baseline. DRDL confirmed that the content and milestones in its response letter will form the basis for the pilot improvement programme to implement the required changes following the July 2013 Improvement Notice (IN).

DRDL believes that the proposed improvements will move the organisation towards a more proactive means of ensuring and assuring their nuclear capability and capacity in the medium to long term. ONR is regularly engaging with DRDL to monitor progress against the objectives and ensure the delivery of the short term improvements and encourage the move to a more proactive organisation in the medium to long term.

DRDL provided ONR with an overview of the development of the overall Improvement Programme and of the initial programme which will be to implement the improvements to the LC36 capability and Management of Change arrangements required by ONR. DRDL has confirmed that agreement had been reached on the roles required for the LC36 organisation baseline and that a draft document has been produced on nuclear safety classification of the roles.

2.1.2 EIM&T

ONR continues to engage with DRDL to seek further improvements to their arrangements for examination, inspection, maintenance and testing (EIMT) of structures, systems and components (SSC) important to safety. DRDL has produced a strategy and plan for EIMT improvements that will address the areas identified by ONR. DRDL is integrating the EIMT aspects into the longer term improvement programme which is being developed from the improvement notice work across the Devonport site (see below). DRDL is to write to ONR regarding EIMT improvements and ONR will continue to engage with DRDL with respect to the details of these improvements.

2.1.3 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).

DRDL is carrying out a range of design and safety case activities for the 14 Dock RAH up to the next regulatory hold points which take account of ONR's requirements for installation off the licensed site. DRDL is working to a programme set out in its Management 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. DRDL plans to carry out inactive commissioning of the tooling that will be used during defuelling in a test facility. ONR and DNSR are carrying out a joint assessment to inform ONR's decision to issue a Licence Instrument to permission the planned inactive commissioning.

2.1.4 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.

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.

2.1.5 9 Dock Safety Case

Following the Secretary of State for Defence's announcement in March of his decision to refuel HMS Vanguard during its forthcoming deep maintenance period in the 9 Dock facility, DRDL has considered the options for the planned revision to the facility safety case and the periodic review of safety for certain facilities that were not intended to be used during future maintenance. 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 safety case to ONR and DNSR and this will enable the regulators to develop a strategy for assessing the case. ONR judged this to be a satisfactory approach which should result in a modern standards safety case for the activities in 9 Dock.

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.

2.1.6 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 (REPPPIR);
- 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 the consultation with local authorities and includes local demographic and geographical considerations.

ONR now uses the term REPIR offsite Emergency Planning Area (EPA) to identify the area around a nuclear site where the local authority has to have a plan for protecting the public in the event of an offsite emergency. Detailed Emergency Planning Zone (DEPZ) has previously been used to define different areas by different stakeholders.

The size of the emergency planning area 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 (January 2014), ONR commenced revision of the offsite emergency planning areas to defined maps. The emergency planning area for Devonport is currently in the process of being re-assessed by ONR.

During the period, ONR inspectors also observed an Emergency Plan training drill at the SRC Forward Control Point (FCP) which was part of DRDL's Emergency Training exercise schedule for 2014 / 15. The overall regulatory assessment of the Emergency Plan training drill was that it met, and in some areas exceeded, ONR's expectation for a training drill with a strong DRDL FCP team performance.

2.1.7 Systems Based Inspection

During this period, ONR led a joint System Based Inspection (SBI) supported by DNSR, of the SRC and 9 Dock dockside cooling systems. During the inspection, the Regulators examined DRDL's implementation of their management arrangements for ensuring that the SRC and 9 Dock cooling systems adequately fulfil the requirements of the respective safety cases.

In summary, the inspection confirmed that the SRC and 9 Dock dockside cooling systems fulfil the requirements of the safety case. The inspection also revealed a number of shortcomings in the local arrangements supporting the systems and a number of areas were also identified that have wider applicability across the site. Actions were raised and have been communicated to DRDL via a joint regulatory letter.

2.1.8 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.

ONR continues to monitor progress with DRDL's Integrated Risk Assessment Process (IRAP) that is intended to replace the traditional approach to safety cases for those activities on the licensed site that had been assessed as having low radiological consequences. DRDL confirmed that production of the IRAP safety case for movement of radioactive materials has recommenced following a cessation period due to lack of resources. ONR has requested a revised and fully resourced plan once available and for the key milestones to be included in DRDL's Through Life Management Plan (TLMP).

ONR is also monitoring the disposal of twelve redundant Modified Magnox Flasks (MMFs) off the Devonport site for the purpose of decontamination and disposal, and is maintaining a close oversight of the project to develop a disposal route for spent resins presently stored at the Nuclear Utilities Building. Good progress is being made to secure suitable disposal routes and minimise waste accumulation at the site.

ONR and DRDL have discussed the potential for delays to the Defuel, Dismantling and Layup Programme (DDL P) which may result from other higher priority work. DRDL has confirmed that it has been engaging with MOD regarding the priorities within the programme and as yet there are no details of timescales and no decisions have been taken. ONR is aware of these discussions and has sought to ensure engagement at an appropriate time, well before the decisions are finalised.

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).

During the period, ONR and DNSR held a meeting with MOD to discuss the recent event relating to accounting for oxygen generating candles in 5 Basin. The MOD investigation findings confirmed that the accounting processes were adequate but that human actions could be improved. MOD undertook to ensure that the lessons learned from the event would be made available to staff prior to the next docking and to ensure that specific training in accounting procedures would be given to all staff with relevant roles.

2.3 Other work

The Superintending Inspector for ONR's Propulsion sub programme visited the site on 15th and 16th July to attend DRDL's Annual Review of Safety 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 2014 Quarter 1, DRDL 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.

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. DRDL also took the opportunity to consider further nuclear safety objectives aimed at sustaining compliance and delivering improvements in other areas.

During this period, DRDL provided ONR with information on the integrated Submarine Business Unit (SBU) improvement programme which highlighted the potential nuclear safety improvements and efficiency savings from integrating the various disparate workstreams. A team has been formed to produce the safety management improvement plan which aims to regularly engage with the Trades Unions and the workforce

DRDL explained that the Improvement Notice (IN) Implementation Programme has taken longer in the development phase than anticipated but the programmes are about to be launched following the completion of the facility assessments. ONR welcomed the news that programme launch was imminent, and undertook to sample the programmes designed to deliver the required outcomes. DRDL confirmed that the initial programme will be to implement the improvements to the capability and Management of Change arrangements required by the ONR letters on LC36 (see above).

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.

A radiological contamination event was reported to ONR in August 2014 and involved an individual inhaling a very small quantity of radioactive material while working on submarine components. The likely consequences of such an intake are nil or negligible. However, exposure to airborne contamination should be prevented. The licensee has carried out its own investigation into the event and ONR is satisfied with the immediate remedial action which has been taken. In August 2014 ONR carried out initial enquiries into the event and subsequently decided to carry out an investigation. The investigation started in September 2014 and is ongoing. ONR's Enforcement Management Model will be used to evaluate the findings of the investigation and determine the appropriate enforcement action needed to secure improvements.

DRDL also notified ONR of shortfalls in the response to activation of the ship's temporary fire alarm and the 15 Dock dock flood alarm. Independently, neither of these relatively minor deviations would have resulted in formal notification to ONR. However, as they had occurred over a period of three working days and given the significance of effective emergency response to site safety, DRDL enforced a 'Safety Stand Down'. The stand down placed a 'stop work' notice on all hot work within the Submarine Refit Complex and on submarines requiring watertight integrity breaches, minimising the effect of any perceived shortfall in the associated emergency arrangements. DRDL has undertaken to formally investigate the two minor events, and ONR has completed initial enquiries. ONR concluded that the incident did not warrant further investigation, however ONR wrote to DRDL requesting improvements in Alarm management and response.

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

ONR has published its first Annual Report and Financial Position 2013 / 14 which includes the Chief Nuclear Inspector's Annual Statement summarising ONR's independent judgements on the areas it regulates. In this statement, we are saying that all of the sites we regulate are safe and secure and are working to reduce hazards. There is further work to be done at some sites, particularly Sellafield, and we are engaging with licensees to secure improvements in specific areas. The report is available at <http://www.onr.org.uk/documents/2014/onr-annual-report-1314.pdf>

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>).

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