



**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 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/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:

- 13 – 17 July 2015
- 21 – 23 July 2015
- 10 – 14 August 2015
- 19 – 21 August 2015
- 7 – 10 September 2015
- 28 – 29 September 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. 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 final defuelling of Laid-Up Submarines (LUSM). 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 RAH is progressing off the licensed site within the Frigate Refit Complex. ONR has an intervention project related to the RAH to provide regulatory oversight through 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). Inactive commissioning of the tooling to be used in the RAH during de-fuelling will be carried out in one of DRDL's on-site test facilities.

### **2.1.2 Submarine Refit Complex (SRC) Safety Case**

During ONR's assessment prior to agreeing to the T boat docking, it became apparent to ONR that the safety submission required supplementary information. This triggered further engagement with the licensee and additional ONR assessment. Following this engagement, ONR agreed to the implementation of the Change Request (CR) to conduct the docking in 14 Dock.

Regulatory engagement is continuing regarding permissioning of the next docking. DRDL is intending to submit a further safety case modification to formalise the supplementary safety assessment within its existing safety case documentation. ONR's assessment of this document and the supporting information will inform the decision on the next T boat docking. ONR continue to seek further improvements to the safety submission.

### **2.1.3 9 Dock Safety Case**

Phase one of the revised 9 Dock Safety Case for the forthcoming deep maintenance period of HMS Vanguard has been through DRDL's due process and has been submitted to ONR for assessment. DRDL's request to implement the revised Plant Safety Case PSC 290 for Vanguard Deep Maintenance Period (VDMP) in accordance with its own modification control arrangements was received during September. ONR is assessing the adequacy of the safety case, will inspect the Facility's readiness, and will permission the implementation of the safety case once these activities have been satisfactorily completed.

### **2.1.4 Emergency preparedness**

ONR now uses the term 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 (the term Detailed Emergency Planning Zone (DEPZ) has previously been used to define this area). The size of the EPA is determined on a site-by-site basis and depends on the hazard presented by the site, with other local considerations being given to particular factors associated with each site.

The Devonport EPA is currently in the process of being re-assessed by ONR. During the period, ONR has had further engagements 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 detailed proposals. ONR will continue to engage with the key stakeholders as the EPA determination process progresses.

### **2.1.5 Licence Compliance Inspection – LC17 (Management Systems)**

The licensee's process management, process mapping and corrective action management arrangements were examined in an LC 17 management systems compliance inspection. In response to an issue raised during a previous LC 17 inspection, DRDL has developed and implemented a process governance policy and ONR consider the issue has been satisfactorily resolved. ONR judged the elements of the management system examined during the inspection to be adequate.

### **2.1.6 Licence Compliance Inspection – LC23 & LC24 (Operating Rules & Instructions)**

In July, ONR inspected the safety management arrangements under LC23 and LC24 controlling mobile crane operations on the main basin. As part of the inspection, ONR determined that the crane operators had a good understanding of the safety management arrangements, that the Dockside management personnel demonstrated a good level of understanding of the safety case requirements and necessary control measures, and that the safety management arrangements included a sufficient number of verification and hold-points. Although the inspection also revealed that improvements could be made to the key control system and operational procedures, ONR did not identify any matters that would preclude the use of mobile crane on the arm of the basin.

### **2.1.7 Licence Compliance Inspection – LC36 (Organisational Capability)**

In July, ONR carried out an inspection to judge the adequacy of arrangements made and implemented under LC36. It was clear that a lot of work has been undertaken by DRDL's LC36 improvement project team and there is evidence of logical thought in developing the arrangements. The work undertaken by the project team has enabled a greater understanding of the organisational structures, staffing and competencies within the pilot area, as well as highlighting areas of vulnerability. The derivation of the nuclear baseline for a pilot area has also helped to identify additional roles that are considered to be Duly Authorised Person status. The newly developed categorisation of roles is an area that is an improvement to the arrangements and a wider view is being taken of roles that may affect nuclear safety. However, ONR identified a number of areas for improvement, some of which are as a result of the pilot not being completed, others as a result of the revised arrangements not meeting ONR's expectations.

ONR reviewed the nuclear baseline, has developed an understanding of the significance of the vulnerabilities within it, and judged that within the pilot area further human resources are required. DRDL has put in place interim compensatory measures aimed at ensuring compliance with safety limits and conditions, which ONR considers to be acceptable.

ONR judged DRDL's compliance with LC36 to be significantly below standard. ONR has formally explained its expectations and DRDL has provided a response with a detailed plan to address the areas for improvement. ONR is monitoring progress through routine Regulatory Interface Meetings and a follow-up LC36 inspection is scheduled for December 2015.

### **2.1.8 Licence Compliance Inspection – LC7 (Incidents on the Site)**

The main aim of August's planned LC7 compliance inspection was to assess DRDL's progress against the recommendations detailed in ONR's letter following the LC7 Bench-marking and compliance inspection carried out in November 2014 and against DRDL's commitments made during the May 2015 LC7 compliance inspection. DRDL has responded positively to the concerns detailed in ONR's letters and inspection findings but within the

restricted scope of the required containment actions. However, ONR is monitoring progress against the longer term site wide actions and will carry out another follow-up intervention later in 2015 / 16 to assess whether the required improvements are being realised.

### **2.1.9 Licence Compliance Inspection – LC14 (Safety Case Production)**

Previously, DRDL has made and implemented arrangements for the production and assessment of safety cases and has improved the understanding and visibility of the safety cases by improving training for facility personnel. Consultation with the end-user has been significantly improved during the production of recent safety cases and this has led to better understanding of the operating rules and their implementation.

During the period, this compliance inspection identified a number of areas for improvement in the LC 14 arrangements which ONR judged to be below standard. DRDL has recognised that improvements are required and is to initiate an independent external review of their approach to modern standards safety cases. ONR considers this to be a satisfactory response.

### **2.1.10 Radioactive Waste Management**

ONR continues to hold regular quarterly meetings with DRDL and HM Naval Base Devonport to monitor progress with ongoing work and a range of projects relevant to the management of radioactive wastes and decommissioning at Devonport.

Life extension of waste management facilities has been recognised as essential to site activities. ONR will be working with the Environment Agency to discuss expectations for the Nuclear Utilities Building (NUB) improvement programme scope and strategy.

Progress has been made to create a comprehensive inventory of remaining legacy wastes on the site. The Disposal and Recycling of Redundant Equipment contract has been further extended, with a core team working to characterise and dispose of items on the inventory.

MoD is sponsoring a project to treat and dispose of ion exchange resins from Rosyth and Devonport. Five companies and six technologies have been identified to start trial work.

## **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).

### **2.2.1 3 Basin compliance inspection**

ONR participated in a DNSR led compliance inspection of HMNB Devonport's arrangements for the control of spent nuclear fuel in 3 Basin on the Naval Base. The aim of the inspection was to review the arrangements for interim fuel storage against the principles for current good, civil practice, as laid out in ONR's Nuclear Safety Technical Assessment Guide which is derived from International Atomic Energy Agency (IAEA) guidance. The scope of the inspection included control of spent fuel, including storage period, passive safety, allowance for future changes, information recording and reporting, the 3 Basin safety case, and that adequate consideration has been given to future arrangements in the area of continued

decommissioning of TRAFALGAR Class Submarines. Overall, DNSR / ONR judged that the 3 Basin arrangements and their implementation for interim fuel storage to be adequate.

### **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 in a maintenance facility. There has been regular engagement on the closure of the IN with DRDL. ONR has examined DRDL's revised health and safety arrangements and concluded that the required safety improvements have been incorporated into the radiological work control processes. Provided these arrangements are suitably implemented and the relevant personnel are adequately trained, ONR should be able to close out the IN by the 31 January 2016 as required by the notice. ONR has agreed with DRDL that an inspection of the arrangements and their implementation will be carried out during the first week in January 2016.

#### **3.1.2 Incidents on the site**

A member of Ship's Company fell from one of a docked submarine's access ladders sustaining incapacitating lower limb injuries. The emergency response to extract the individual from the boat to safety required unplanned access of multiple emergency service vehicles to site and unplanned operation of the dockside crane. These response actions resulted in a challenge to some of the 14 Dock Safety Case limits and conditions and some of the associated compliance documentation.

DRDL's Plant Manager and members of the Dockside Management team remained present on site throughout the duration of the response to ensure that any safety case limits were not exceeded. The Plant Manager confirmed that the bounding limits and conditions were not challenged during recovery of the injured person.

DRDL has convened an investigation and the ONR Site Inspection team has gathered preliminary information relating to DRDL's management of the emergency response. The conventional safety aspects of the event are being considered by the ONR Conventional Safety Inspection team who visited the accident scene to make observations and take measurements in relation to the ladder access arrangements.

### **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 LI has been issued during the period:

Table 1

Licence Instruments and Enforcement Notices Issued by ONR during this period

Date	Type	Ref No	Description
18/09/15	LI	559	Agreement to modify the 14 Dock Reactor House (under construction) by introducing a seismic trigger system

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

## 5 NEWS FROM ONR

### Retirement of the Chief Nuclear Inspector

Dr Andy Hall, the first Chief Nuclear Inspector to hold this statutory office, announced his decision to retire from ONR in November 2015 and until his retirement he is taking a period of compassionate leave for personal reasons. The ONR Board, with the approval of the Secretary of State, has appointed Dr Richard Savage as Acting Chief Nuclear Inspector, pending a process to fill the role on a permanent basis. Richard was previously Head of the Defence Nuclear Safety Regulator before joining ONR in his current role as a Deputy Chief Nuclear Inspector.

### 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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Published 07/15

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