



**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 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:

- 11 – 14 July 2016
- 20 – 21 July 2016
- 15 – 19 August 2016
- 12 – 16 September 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. Where 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 (LC7): DRDL indicated that it is making good progress with the delivery of this NSIP workstream. DRDL has engaged positively with ONR regarding Operational Experience Feedback (OEF) information systems and organisational learning which were both findings from March's LC7 compliance inspection. DRDL has also completed the recruitment of a team of dedicated event investigators.

Nuclear Safety Capability & Competence (LC10, 12, 36): DRDL confirmed that the nuclear baseline which set out the staffing requirements for all of the Submarine Refit Complex (SRC) staff has been completed including learning lessons from its Learning from Experience (LFE) exercises. DRDL believes that it now has a much improved SRC nuclear baseline and has produced metrics to confirm this. ONR advised DRDL to consider using the range of metrics they have developed as evidence that staffing levels remain appropriate to match the workload in the SRC. ONR has reviewed the latest version of the nuclear baseline arrangements document and concurs with the licensee that it now reflects relevant good practice.

Infrastructure (LC22): DRDL stated that it has developed a new Project Initiation process / form (PIF) for the major projects planned for the site. Also, DRDL has recently produced tiered project plans which it has shared with ONR. DRDL will provide information to ONR on the projects using the new PIF process before the planned ONR inspection in November 2016.

Work Authorisation & Control (WAC - LC23, 24, 26): DRDL confirmed that its revised process for control and authorisation of work is being used in 9 Dock. The WAC project has been implementing improvements to DRDL's control and supervision 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 section 3 of this report).

Safety Management Systems: ONR continues to engage with DRDL to influence the prioritisation and pace of delivery of this workstream. DRDL has begun to actively pursue the Safety Information component of this workstream.

The DRDL Board's response to ONR raising its concerns in the recent Level 1 Regulatory Interface Meeting (RIM) and Deputy Chief Nuclear Inspector / Chief Executive engagements appears to have been positive and supportive of the delivery of the NSIP. A number of Directors and Senior Managers have been tasked with LC responsibility / ownership to deliver the necessary improvements to LC compliance. ONR intends to monitor the roll out of NSIP 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 defuelling of Laid-Up Submarines (LUSM).

ONR is progressing with an intervention 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:

- Progress assessment findings captured in DRDL's readiness to proceed letter
- Review the extant RAH safety case and Inactive Commissioning schedule
- Further develop flexible permissioning arrangements through introduction of engagement windows
- A specific routine Regulatory Interface Meeting has been established to resolve / escalate any issues
- Ensure that DRDL carries out an LFE exercise on the RAH move to / installation in 14 Dock.

### **2.1.3 Submarine Refit Complex (SRC)**

ONR seeks 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 Quarter 1. In the period, DRDL has carried out an optioneering study and committed to start the removal of the SRC refuelling crane pedestal and other legacy civil structures. DRDL has gone out to tender for pedestal removal and is currently awaiting the tender responses.

### **2.1.4 9 Dock**

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

### **2.1.5 Licence Compliance Inspection – LC26 (control & supervision of operations)**

ONR inspectors carried out an LC26 compliance inspection in SRC and 9 Dock. We found evidence of good stakeholder interactions during early planning activities and setting to work meetings. Supervisors and operatives understood the tasks they were performing and the safety implications of the work being conducted. We concluded that there was adequate control of nuclear safety related tasks through the Facility Plant Authorisation Group (FPAG). The FPAG is well attended with an effective level of governance that requires a unanimous decision from members prior to tasks being authorised. However, in both 9 Dock and SRC we concluded there was an inconsistent approach to how electrical and mechanical isolations are planned, executed and controlled. In our opinion, to enable workers to carry out activities safely the plant state should be reflected within the instructions and drawings to give clear and concise guidance. We also noted the number of separate individuals responsible for control of isolations. In our judgement, DRDL should consider a single point of ownership for the planning, execution and control of isolations across the respective sites. SRC are currently conducting a review of the isolations of plant and equipment, and benefit could be gained from rolling out a consistent approach across both SRC and 9 Dock once developed. ONR will monitor the work on completing the SRC isolation review and its subsequent roll out through routine regulatory activity.

### **2.1.6 Licence Compliance Inspection – LC15 (Periodic Review of Safety)**

ONR inspected DRDL's arrangements made under Licence Condition LC 15 Periodic Review of Safety (PRS) and their implementation. DRDL has improved its arrangements for periodic review since the last inspection and has addressed the majority of the shortfalls identified in

ONR correspondence. DRDL has introduced a PRS Governance Board to monitor programme performance and action close-out which provides management attention to a number of legacy performance issues.

We found the Primary Circuit Decontamination (PCD) facility PRS had limited scope and was only completed on a specific plant area. The safety case was also reviewed separately outside the PRS scope. ONR expects a PRS review to include a comprehensive assessment of the facility's condition, operating experience, safety case and management arrangements and culture. In addition, DRDL's arrangements currently do not include provision for short term or exceptional reviews and do not require consideration of Leadership and Management for Safety. We also found that the Basis for Continued Operations documents are only required to be sent to the safety committee for noting and not for consideration and advice. Based upon the evidence we are of the opinion that DRDL needs to make improvements to its PRS arrangements and a regulatory action has been placed on the licensee.

### **2.1.7 Unannounced Licence Compliance Inspection – LC27 (safety mechanisms, devices & circuits)**

ONR inspectors carried out an unannounced LC27 compliance inspection in 9 Dock. We attended the daily meetings where all the work planned for the day (and following days at the weekend) was reviewed. These were well chaired and disciplined meetings. A plant walk-down to inspect work being undertaken on a 9 Dock upgrade project's safety mechanisms and devices was made. The inspectors observed the associated tasks which appeared to be adequately controlled and managed. Immediately following the inspection ONR shared the findings with DRDL at a debrief meeting. Overall, ONR judged that DRDL had demonstrated adequate compliance with its arrangements made under LC27.

### **2.1.8 Level 1/ 2 Demonstration Emergency Exercise 'Short Sermon 16'**

A team of ONR and DNSR inspectors observed the Level 1 / 2 Short Sermon 2016 (SS16) exercise that was both the annual demonstration of the Devonport Royal Dockyard Ltd Nuclear Licensed Site and HM Naval Base Devonport emergency arrangements as required under Licence and Authorisation Condition 11, and a test of Plymouth City Council's offsite emergency plan as required under REPPiR. The exercise scenario was based around a simulated reactor accident on a fictional Trafalgar Class submarine whilst alongside 9 Wharf within HMNB Devonport.

The Regulators noted one action and this was in relation to the arrangements for casualty rescue which we deemed to be the aspect of the response in need of improvement. We will observe a rehearsal of these aspects at a future shift exercise on a date to be agreed. We also indicated that where there are good practices in one location, efforts should be made to promulgate these to all locations undertaking the same activities e.g. systematic approach to Potassium Iodate Tablet distribution. We also pointed out that we had witnessed some direct coaching of players by Umpires and Observers and that this behaviour has the potential to undermine the value of the exercise. Overall, ONR and DNSR judged that the exercise had been an adequate demonstration of the Devonport emergency arrangements made under LC11 and AC11, and had been a test of the offsite emergency plan as required by REPPiR.

### **2.1.9 Emergency Planning Area**

ONR is reviewing the Devonport Detailed Emergency Planning Zone (DEPZ) and intends to publish a revised Emergency Planning Area (EPA). ONR has had further engagements with DRDL, HMNB (D), DNSR, and the Local Authorities regarding the determination of the Devonport EPA and shared its detailed proposals.

ONR met with DRDL, HMNB (D), Plymouth City Council, and Devon and Cornwall County Councils to provide a recap of the work undertaken by ONR with respect to the Devonport

REPPIR off-site emergency planning and prior information determination, show the proposed planning areas and outline the way forward to publication of the determination. ONR's EPA determination is expected to be completed and issued in November 2016.

### **2.1.10 Radioactive Waste Management**

ONR and EA held their quarterly waste meeting with DRDL and HM Naval Base Devonport. DRDL continues to make timely disposals of operational and legacy wastes. A schedule for all radwaste activities has been drafted including disposals and maintenance of radwaste supporting plant. This is a positive step for managing radwaste activities across the site and in the future.

The Nuclear Utilities Building (NUB) life extension project has been suspended in its current form. The new strategy is to sustain current capability and a decision on what facility or set of facilities is needed to support the Submarine Dismantling Project (SDP) will be taken separately. Subsequently, a meeting was held between ONR and DRDL to discuss justification for continued operation of the NUB following this strategy change.

## **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).

## **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 Incidents**

In August 2016 ONR conducted follow up enquiries relating to an incident on the 43 Te crane which occurred on 9 Dock. ONR's follow up enquiries concluded that there was minimal nuclear safety risk associated with the incident. ONR did however identify a number of areas for improvement relating to the management and prioritisation of defects. ONR is in the process of confirming these areas for improvement to DRDL and will track progress through routine interventions.

### **3.1.2 Recurring Operating Limits and Conditions non compliances**

During the previous period, ONR had identified an adverse trend over a prolonged period in relation to failure to comply with Operating Limits and Conditions (OLCs) under LC23 relating to the control of dockside cranes. ONR confirmed that it had undertaken a review and

independent analysis of the DRDL investigations to identify themes where opportunities for improvement exist.

ONR received a letter from DRDL detailing its response to the recurring non compliances. DRDL proposed a phased improvement programme (short, medium and long term) to achieve specific objectives including:

- Implementing immediate increased control measures during 15 Dock crane operations
- Implementing increased control measures to stabilise SRC and 9 Dock dockside compliance
- Implementing revised safety management arrangements across SRC and 9 Dock

In response ONR sent a letter to DRDL requiring the licensee to formulate an action plan to address the OLC non compliances and implement some short-term measures to help prevent recurrence. ONR will assess DRDL's progress against its action plan at a review meeting and associated LC23 compliance inspection scheduled for November 2016.

#### **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

### 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>.

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Published 11/16

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