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| ONR Site Report  Rolls-Royce Submarines Limited – Nuclear Fuel Production Plant (NFPP), Raynesway & Neptune Reactor, Raynesway |



ONR Site Report

Rolls-Royce Submarines Limited - Nuclear Fuel Production Plant (NFPP), Raynesway & Neptune Reactor, Raynesway

**Report for period:** 1 July – 31 December 2024

**Authored by:** Principal Inspector

**Approved by:** Superintending Inspector

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Foreword

This report is issued as part of our commitment to make information about inspection and regulatory activities relating to the above site available to the public. Reports are distributed to members for the Rolls-Royce Submarines Limited (RRSL) Local Liaison Committee (LLC) and are also available on our website: [www.onr.org.uk/publications/regulatory-reports/site-specific-reports/llcssg-reports](http://www.onr.org.uk/publications/regulatory-reports/site-specific-reports/llcssg-reports).

Our site inspectors usually attend RRSL Local Liaison Committee (LLC) meetings where these reports are presented and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should email us at [contact@onr.gov.uk](mailto:contact@onr.gov.uk).

Contents

[1. Inspections 4](#_Toc189573813)

[2. Routine matters 4](#_Toc189573814)

[3. Non-routine matters 6](#_Toc189573815)

[4. Regulatory activity 7](#_Toc189573816)

[5. News from ONR 8](#_Toc189573817)

[6. Contacts 8](#_Toc189573818)

# Inspections

## Date(s) of inspection

Our site inspector undertook interventions on the following dates during the report period:

* 25 September
* 21 November

# Routine matters

## Inspections

Inspections are undertaken as part of the process for monitoring compliance with:

* the conditions attached by ONR to the nuclear site licence (NSL) granted under the Nuclear Installations Act 1965 (NIA65) (as amended)
* the Energy Act 2013
* the Health and Safety at Work etc Act 1974 (HSWA74)
* regulations made under HSWA74, for example the Ionising Radiations Regulations 2017 (IRR17) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring the 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. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections of the Raynesway licensed sites covered the following:

* organisational capability
* emergency preparedness

Members of the public, who would like further information on our inspection activities during the reporting period, can view site Intervention Reports at [www.onr.org.uk/intervention-records](http://www.onr.org.uk./intervention-records).

Should you have any queries regarding our inspection activities, please email [contact@onr.gov.uk](mailto:contact@onr.gov.uk).

## Emergency Exercise: ‘FOSSA 24’

In November 2024, a team of our inspectors observed RRSL's emergency demonstration exercise ‘FOSSA 24’, making observations in the Emergency Control Centre (tactical), Bronze Command (operational), contact muster area and technical cell, as well as observations of the deployed teams. We judged that this was an adequate demonstration of RRSL’s emergency arrangements.

Command and control dynamics in both silver and bronze commands were positive, as was the performance of the deployed teams and the decontamination and casualty handling aspects of the exercise. We judged RRSL’s self-assessment and learning points to be comprehensive and mirrored the observations from our inspectors.

## Organisational Capability

RRSL has proactively identified improvement activities relating to current and future organisational capability, especially as it looks to expand significantly in the coming decade. RRSL has also identified areas for improvement in managing its nuclear baseline capability. RRSL is proactive in its improvement programme and ONR is monitoring RRSL’s progress via routine engagements as it develops its future capabilities and develops new facilities.

## Other work

In addition to our inspections listed in Section 1.1, we undertook other regulatory engagements with RRSL covering a wide range of topics including conventional (non-nuclear) health and safety, radioactive waste management and radiation protection progress on improvements RRSL identified in its annual review of safety and environment (AROSE).

We continued our oversight of ongoing major construction or modification projects, such as the Neptune refurbishment project and the Dreadnought Production Facility project. These are subject to our [permissioning processes, published on our website](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.onr.org.uk%2Fmedia%2Fjcylqnxu%2Fonr-per-proc-001.docx&wdOrigin=BROWSELINK).

Our site inspector held several meetings to progress routine regulatory business including regulatory issues database reviews, regulatory interface forums and with the internal regulatory function. Our site inspector continues to hold weekly meetings with senior RRSL management to ensure health and safety matters continue to be addressed appropriately.

Our site inspector continues to hold periodic meetings with safety representatives to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work.

# Non-routine matters

Licensees are required to have arrangements to respond to non-routine matters and events. Our inspectors judge the adequacy of the licensee’s response, including actions taken to implement any necessary improvements.

Several events were reported during this period. Most were minor and we were content with RRSL’s internal investigations and learning to prevent recurrence in most cases. We keep an oversight of the outcomes and follow-up as considered necessary.

Matters and events of particular note during the period were:

## Failed test of a safety system interlock – INF-4189

In July 2024, RRSL reported that an interlock, part of a valve system, designated in the nuclear safety case as a safety mechanism, was routinely tested as part of a 6-monthly test and found to not operate correctly.

Other lines of defence were operational, which would have prevented an incident, should the operator have attempted to incorrectly set the valves.

RRSL categorised the event as an INES level 1 event and undertook an investigation with learning actions. This was provided to ONR as part of our follow up and we judged no further action was required.

ONR noted in the investigation that a significant contributor was the categorisation of a modification that had been undertaken previously that affected the interlock and prevented it from operating correctly when re-assembled. See section below.

## Other events with common causes or contributory causes.

RRSL has previous identified that control of modifications under its arrangements made to comply with Licence Condition (LC) 22 needs improvement. During 2024, there were additional minor events that related to modifications being incorrectly controlled or implemented and others where shortfalls in implementation were contributory (as INF-4189 above). RRSL has improved its process and retrained all related staff during 2024. ONR closed the related regulatory issue but will monitor future events to gain assurance that RRSL has remedied the shortfalls.

We have previously reported on shortfalls against the Ionising Radiation Regulations 2017 (IRR17), which RRSL has addressed. We continued to monitor the roll out of radiation risk assessments against RRSL’s standard. We were satisfied with RRSLs roll out, closed the related regulatory issue and will monitor as part of normal regulatory engagements.

# Regulatory activity

We may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, we issue regulatory document 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 take a range of enforcement actions, including the issuing of an enforcement notice.

* The following licence instruments, enforcement notices and enforcement letters have been issued during the period:

**Table 1: Licence instruments and enforcement notices issued by ONR during this period**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Type | Reference | Description |
| 19/07/24 | Licence Instrument | LI 510, 511 | Approval of an alteration to the terms of reference for the nuclear safety committee and arrangements for urgent safety proposals for NFPP (NSL 49, LC13) |
| 19/07/24 | Licence Instrument | LI 506, 507 | Approval of an alteration to the terms of reference for the nuclear safety committee and arrangements for urgent safety proposals for the Neptune Reactor (NSL 13C, LC13) |
| 15/11/24 | Licence Instrument | LI 512 | Approval of an alteration to the emergency arrangements for NFPP (NSL 49, LC11) |
| 15/11/24 | Licence Instrument | LI 508 | Approval of an alteration to the emergency arrangements for the Neptune Reactor (NSL 13C, LC 11) |

Reports detailing the above regulatory decisions can be found on our website: [www.onr.org.uk/publications/regulatory-reports/site-specific-reports/project-assessment-reports](http://www.onr.org.uk/publications/regulatory-reports/site-specific-reports/project-assessment-reports).

# News from ONR

For the latest news and information from us, please read and subscribe to our regular email newsletter ‘ONR News’ at [www.onr.org.uk/news/newsletter](https://www.onr.org.uk/news/newsletter/).

# Contacts

Office for Nuclear Regulation

Redgrave Court

Merton Road

Bootle

Merseyside

L20 7HS

website: [www.onr.org.uk](http://www.onr.org.uk)

email: [Contact@onr.gov.uk](mailto:Contact@onr.gov.uk)

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