

Office for Nuclear Regulation (ONR)

Site Report for Sizewell B

Report for period 1 April – 30 June 2021

Foreword

This report is issued as part of ONR's 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 Sizewell SSG and are also available on the ONR website (<http://www.onr.org.uk/llc/>).

Site inspectors from ONR usually attend Sizewell SSG 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 contact ONR.



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1 Inspections

Dates of inspection

The ONR site inspector made inspections on the following dates during the report period 1 April-30 June:

- 13-15 April
- 19-23 April
- 27-29 April
- 4-6 May
- 11-12 May
- 15-17 June

2 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 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 2017 (IRR17) 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. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections of Sizewell B covered the following:

- Examination, maintenance, inspection and testing;
- Management of operations including control and supervision;

- Staff training, qualifications and experience;
- Radiological protection;
- Quality assurance and records;
- Conventional (non-nuclear) health and safety.

The bulk of the inspection activity during the period was related to refuelling outage 17 (RO17). Specialist inspectors from the mechanical engineering, structural integrity and control and instrumentation disciplines visited site to ensure that appropriate maintenance of systems, structures and components was being undertaken to an adequate standard. In addition, specialists from the electrical engineering discipline carried out a remote inspection, and a civil engineering specialist reviewed the output of the licensee's programme of civil engineering tests and inspections. No issues of concern were identified during these inspections.

In addition, specialist inspectors from the conventional health and safety, radiological protection and quality assurance disciplines visited site to inspect the control of work, and the site inspector carried out a number of control and supervision themed inspections. One issue of concern was identified, relating to a contractor's understanding and use of risk assessments. This was addressed by raising a regulatory issue against that contractor, who was quick to respond and make improvements. Overall, however, ONR noted an improvement in safety performance from the previous outage.

The inspections described above will inform ONR's permissioning of the reactor's return to service, via a consent issues under LC30 (periodic shutdown). This permissioning decision will be explain in a project assessment report which, when complete, will be available on ONR's website.

During the reporting period, ONR judged the arrangements made and implemented by the site in response to safety requirements to be satisfactory in the areas inspected. Where improvements have been identified, the licensee has made a commitment to address those issues, and ONR inspectors will closely monitor progress during future site inspections. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales. Members of the public, who would like further information on ONR's inspection activities during the reporting period, can view site Intervention Reports at www.onr.org.uk/intervention-records on our website www.onr.org.uk. Should you have any queries regarding our inspection activities, please email contact@onr.gov.uk.

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:

- At the start of the outage, during the process of switching between two trains of the auxiliary cooling water (ACW) system, a failure of the ACW inlet pipework occurred.

The ACW is a sea-water system that provides cooling to a number of heat exchangers, most of which are in the turbine hall. It was in the turbine hall that this failure occurred. Two operators were present at time, carrying out the switching operations, and both received minor scalding as a result of the hot sea water impact. Both have since been able to return to work.

ONR carried out preliminary enquiries, and was kept informed as the licensee's own investigation progressed. The failed pipework has subsequently been replaced, and the operating procedures have been improved to prevent recurrence of the incident.

- During inspection of the reactor upper internals, prior to their planned removal as part of RO17, an anomaly was identified. A cylindrical component called a 'thermal sleeve' had become detached from the reactor pressure vessel (RPV) head, and had remained in place on a control rod drive shaft on the upper internals. The thermal sleeve is designed to be an integral part of the RPV head, although it does not form part of the RPV pressure boundary - the primary job of the thermal sleeve is to protect the control rod drive mechanisms from thermal transients.

The discovery of this detached thermal sleeve prompted a programme of work by the licensee to replace that sleeve and other sleeve that might be at risk of failure in the future. This programme of work has significantly extended the original programme for RO17, and the majority of ONR's inspection and assessment activity in the latter part of the outage has been focussed on this issue. Demonstrating that this issue has been adequately resolved will be a key factor informing our decision whether or not to grant consent to restart.

4 Regulatory Activity

ONR 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 take a range of enforcement actions, to include issuing an Enforcement Notice.

No LIs, Enforcement Notices or Enforcement letters were issued during this period.

5 News from ONR

Below are summaries of key activities over the last three months. Further detail is available on our [website](#).

Covid-19 (Coronavirus) (ONR position)

We are continuing to obtain assurance that nuclear site licensees and other dutyholders are adequately resourced to continue to safely and securely carry out their activities. We remain satisfied with industry's response at this time and there has been no significant change to dutyholders' safety and security resilience.

All licensed sites are required to determine minimum staffing levels necessary to ensure safe and secure operations and contingency arrangements in the event that these levels are not met. This condition is specifically designed to ensure that industry can adequately manage and control activities that could impact on nuclear safety and security under all foreseeable circumstances, including pandemics.

Although ONR staff continue to work primarily at home, (carrying out as much of our work as possible via videoconference, phone and email), we are carefully and progressively increasing our site footprint. We continue to assess our on-site presence in line with government guidelines and our business needs, ensuring we have a balanced portfolio of on-site inspections and interventions, that are important to support effective regulation across our purposes.

Our latest position can be found on our [website](#).

Enforcement Action

- In April, we announced that EDF [complied](#) with a Direction we served on 14 December 2020, under the Pressure Systems Safety Regulations (2000). This followed an inspection, at which found a number of pressure system components at Heysham 1 Power Station were overdue their scheduled examination.
- In May, we agreed to [extend an improvement notice](#) served on EDF in September 2020, recognising the progress made so far. The notice was served after some of the equipment used to measure reactor power at Heysham 2 was incorrectly configured. We judged that Heysham 2 is able to operate safely, and that additional time to demonstrate the required improvements will not pose a risk to safety. EDF must now comply with the improvement notice by 31 July 2021.
- In June, we announced that Rolls-Royce Submarines Ltd (RRSL) had [complied](#) with an improvement notice served on 29 May 2020. The notice was served after RRSL operators brought 21 units of fissile material into the facility – which

exceeding the limit defined within the safety case and set out in the Criticality Control Certificate for the facility.

Stakeholder Engagement

- In April, we published an [article](#) introducing our newest board member, Jean Llewellyn, who joined us in October 2021, as security lead. Jean brings with her a wealth of experience, including serving as a non-executive director on the board of the World Institute for Nuclear Security since 2018 – which has given her a good understating of the global security challenges facing the nuclear industry.
- In May, we issued our e-bulletin '[ONR News](#)' to subscribers. This issue included farewell reflections from our outgoing chief executive, a leadership update, further information on our COVID -19 response, and the results of our latest stakeholder survey. You can sign up for our e-bulletin [here](#)
- On 1 June, we [announced](#) the full implementation of our new leadership structure. Mark Foy is now our combined Chief Executive and Chief Nuclear Inspector. He is supported by Sarah High as Deputy Chief Executive, and Donald Urquhart as Executive Director of Operations.
- In June, we published our new [Corporate Plan for 2021/22](#), which sets out our key priorities to protect the public by securing safe nuclear operations.
- In June, our State System of Accounting for and Control of Nuclear Material (SSAC) project - which saw ONR become the UK's national nuclear safeguards regulator from 31 December 2020, was [shortlisted for a national award](#) in the Project Management Institute's UK National Project Awards in the 'Project of the Year (Public Sector)' category.
- Nuclear safeguards are measures to verify that countries comply with international obligations not to use nuclear materials from civil nuclear programmes for non-peaceful purposes.

6 Contacts

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