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| ONR Site Report  EDF Energy NGL – Sizewell B |



ONR Site Report

EDF Energy NGL - Sizewell B

Report for period: 1 April – 30 June 2023

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Approved by: Head of Regulation

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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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# Inspections

## Date(s) of Inspection

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

* 12 – 13 April
* 23 – 25 May
* 27 – 28 June

# 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 etc 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 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 Sizewell B covered the following:

* Staff training, qualifications and experience;
* Emergency exercises and review meetings.

Staff training, qualifications and experience

The site inspector, accompanied by a specialist inspector in the field of probabilistic safety assessment (PSA), considered the process and procedures in place for developing and delivering training for a number of activities:

* Reactivity management.
* The use of RiskWatcher, the site’s PSA tool.
* Management of ageing and obsolesence in control and instrumentation systems.
* Visual inspection undertaken to demonstrate compliance with the American Society of Mechanical Engineers (ASME) design code for nuclear pressure vessels.

By examining documentation and speaking to a variety of operators, maintenance personnel and nuclear safety group staff we determined that:

* Training needs associated with reactivity management (including the need for ongoing or refresher training) have been documented, and post holders have received the relevant training and have any necessary follow-up training scheduled.
* Training needs associated with the use of RiskWatcher were well identified, and the relevant training delivered, for shift managers and control room supervisors, and for nuclear safety group users. However, we did observe some shortfalls in the definition and recording of training for reactor operators and work week managers. In practice, those individuals had received appropriate training but the process for delivering this training is not formalised. We raised a regulatory issue for the licensee to address this shortfall.
* Training for ageing and obsolescence management and as-found condition recording has been developed and is being delivered to relevant engineering and maintenance staff across the site.
* The specific requirements of ASME for the training of individuals undertaking visual inspections have been captured in the licensee’s procedures. Staff undertaking such inspections during the most recent refuelling outage could demonstrate that they had received the appropriate training.

Emergency exercises

An ONR inspection team observed and assessed Sizewell B’s annual emergency exercise. The scenario involved a significant steam leak, failure of the main steam isolation valve and subsequent fuel failure resulting in an off-site release. In its response, the licensee:

* Established its on and off site command centres;
* Assessed the plant conditions and terminated the steam leak in a timely manner;
* Located, assessed, rescued and treated four casualties;
* Completed a full site muster, accounting for site personnel in a timely manner and
* Made appropriate declarations, escalating to off-site nuclear emergency.

Some areas for improvement were identified, associated with:

* A sense of urgency throughout the command chain;
* Systematic casualty assessment and handling and
* Management of high ambient temperatures.

Overall we were satisfied that the exercise objectives and performance indications were largely met and that the exercise was an adequate demonstration of the Sizewell B’s arrangements.

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](http://www.onr.org.uk./intervention-records) on our website [www.onr.org.uk](http://www.onr.org.uk).

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

# 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.

There were no such matters or events of significance during the period.

# 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.

The following LIs, Enforcement Notices and Enforcement letters have been issued during the period:

* Consent 561. Sizewell B’s operating cycle lasts approximately 18 months, after which it is required to shut down so that it can be refuelled. When refuelling is undertaken, some of the fuel assemblies (about one-third) are replaced with new ones. The existing fuel assemblies are returned to the core in a rearranged array to ensure optimum fuel utilisation.  
    
  To continue to operate safely and reliably, the reactor plant requires regular examination, inspection, maintenance and testing (EIMT). Continuous improvement also requires plant upgrades to be implemented where deemed to be reasonably practicable. While some of these activities can safely take place when the reactor is operating at power, many of them require the reactor to be shut down. The refuelling outages at Sizewell B provide the opportunity for undertaking such activities.  
    
  The requirement to shut down periodically for the purposes of EIMT is captured in LC 30. LC 30(1) states that ’when necessary for the purpose of enabling any examination, inspection, maintenance or testing of any plant or process to take place, the licensee shall ensure that any such plant or process shall be shut down in accordance with the requirements of its plant maintenance schedule referred to in Condition 28”. LC 30(3) further states that “The licensee shall, if so specified by ONR, ensure that when a plant or process is shut down in pursuance of paragraph 1 of this condition it shall not be started up again thereafter without the consent of ONR.’  
    
  The reactor at Sizewell B was shut down on 17 February, 2023, for its eighteenth refuelling outage, RO18. ONR carried out inspections throughout the outage. The inspections were carried out during the previous reporting period, but on the basis of those inspections, ONR issued LI 561 on 25 April 2023 to provide its consent to restart the reactor, in accordance with LC 30(3).

**Table 1: Licence Instruments and Enforcement Notices Issued by ONR during this period**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Date | | Type | | Ref. No. | Description |
| 25/04/23 | Consent | | 561 | | Consent to the start up of the Sizewell B reactor |

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

# News from ONR

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

# Contacts

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