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| ONR Site Report  EDF – Hartlepool Power Station |



ONR Site Report

EDF - Hartlepool Power Station

Report for period: 1 January – 31 March 2024

Authored by: Nominated Site 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 Hartlepool Local Community Liaison Committee and are also available on our website <http://www.onr.org.uk/llc/>

Our site inspectors usually attend Hartlepool Local Community Liaison Committee 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 us by email at [contact@onr.gov.uk](mailto:contact@onr.gov.uk).

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# Inspections

## Date(s) of Inspection

Our site inspector made inspections on the following dates during the report period 1 January to 31 March 2024:

* 30-31 January
* 21-22 February
* 5 March

# 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 Hartlepool power station covered the following:

* examination, maintenance, inspection and testing
* management of operations including control and supervision
* emergency preparedness
* security

**Level 1 exercise redemonstration**

In October 2023 Hartlepool Power Station conducted their annual Level 1 exercise. This exercise was scheduled as a security exercise and was assessed by ONR and EDF’s Emergency Arrangement Review Team. We assessed the exercise as ‘not adequate’ and as such a redemonstration exercise was scheduled for February 2024. ONR and EDF’s internal regulator assessed this redemonstration and were satisfied that the station had adequately demonstrated their emergency arrangements. The associated level 3 regulatory issue raised from the original demonstration was therefore closed.

**Reactivity Management – LC 26 (control and supervision of operations)**

The aim of this Licence Condition 26 inspection was to gain increased oversight of the control of operations, with a particular focus on reactivity management.

At Hartlepool, an incident occurred during a reactor startup in December 2022 in which power exceeded that allowable for the control rod state at the time. NGL’s investigation identified corrective actions including new reactivity management training and improvement to operating documentation. As a result, ONR set a regulatory action to conduct an inspection covering control room standards and training, as well as criticality management.

During this inspection we did not find any significant shortfalls but did provide regulatory advice on several points and raised one Level 4 regulatory issue. Overall, the inspection was rated ‘Green.’

**Systems based inspection - buildings, structures and infrastructure**

No system-based inspections took place during this reporting period.

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).

## Other Work

During the period, the site inspector held routine meetings with station staff to monitor the performance of the site by:

* Reviewing the current plant status and all open regulatory issues associated with Hartlepool Power Station with the Technical and Safety Support Manager.
* Meeting on a weekly basis with the site-based Independent Nuclear Assurance team to ensure the internal regulator function remains effective and verifying information provided by the station.

# 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.

Matters and events of particular note during the period were:

**Preliminary enquiries: demineralised water stocks**

In January 2024 EDF made the decision to shut down all four reactors at the Heysham 1 and Hartlepool power stations. This was due to a steam valve failure at Heysham 1 during operation. This challenged the continued safe operation of these valves which are used at both stations and so the decision was made to shut down all the reactors to investigate the fault. This event was the subject of a separate ONR investigation and resulted in an improvement notice being issued to Heysham 1 (which has now been complied with) but is referenced here for context as the reason for the Hartlepool reactors being shut down.

When the Hartlepool reactors were shut down, the flow rate of (demineralised) water used for post-trip cooling of the reactors was observed to be far higher rate than was assumed by the safety case. This was later identified to be caused by leakages within the system and other genuine system usages that hadn’t been considered within the safety case. This presented a potential safety challenge as there is an expectation that the site will be able to maintain adequate water supplies to deal with the requirements to cool down both reactors when they shut down. This requirement is usually achieved by ensuring defined water stocks are maintained in the five reserve feed tanks, which are continuously monitored. In justifying the required water stocks the safety case assumed that there would be minimal losses from the water system to ensure that the water in the reserve feed tanks is sufficient for cooling down both reactors on shutdown. This safety case assumption was demonstrated to be incorrect when the reactors were shut down in January 2024.

As all water supplies, and all safety systems, were available at the time of shutdown, there was no actual safety consequence due to this event. The potential however was that if water supplies to the station had been interrupted while shutting down the reactors, this would have challenged the ability to provide adequate post-trip cooling to the reactor fuel.

Prior to return to service of each reactor, we reviewed EDF’s interim justification for continued operation and scrutinised the commitments that were made and the actions identified in their internal investigation. ONR will ensure that EDF delivers against the commitments and post investigation actions, ensuring they are completed in a timely manner.

We conducted preliminary enquiries as per ONR’s investigation process. We concluded that EDF had failed to adhere to the requirements of site licence conditions and therefore issued an enforcement letter. This enforcement letter requires EDF to provide a detailed plan to ONR on how they will address all commitments and investigation actions. EDF must provide this response in writing by 30 June 2024, although routine engagements on progress have been maintained since the return to service of the reactors. A level 3 regulatory issue has been raised by ONR to maintain formal oversight of the actions required in the enforcement letter.

# Regulatory Activity

We may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, we issue 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:

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

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Type | Ref. No. | Description |
| 23/04/24 | Enforcement letter | ONR-EL-23-056 | Preliminary Enquiries into demin water stocks at Hartlepool power station Licence Condition 23 – Operating Rules |
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# 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/onrnews](http://www.onr.org.uk/onrnews).

# Contacts

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