

Office for Nuclear Regulation (ONR)

Site Report for Heysham Power Stations

Report for period 1 January – 31 March 2022

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 Local Community Liaison Committee and are also available on the ONR website (<http://www.onr.org.uk/lc/>).

Site inspectors from ONR usually attend the Heysham 1 and 2 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 ONR.

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1. Inspections

1.1. Dates of Inspection

The ONR site inspector made inspections on the following dates during the reporting period:

Heysham 1

10-13, 24-27 January

14-17, 23-24 February

Heysham 2

26 January

22, 24 February

1-3, 16, 23-25 March

In addition, our specialist inspectors were involved in interventions on the following dates during the reporting period:

Heysham 1

15-16 February

28-31 March

Heysham 2

24 February

1-3, 23-25 March

2. Routine Matters

2.1. 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 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 Heysham stations covered the following:

- examination, maintenance, inspection and testing (Heysham 2)
- management of operations including control and supervision (Heysham 2)
- staff training, qualifications and experience (Heysham 2)
- modifications to plant, equipment and safety cases (Heysham 2)
- emergency preparedness (Heysham 2)
- safeguards (Heysham 1)
- radioactive waste management (Heysham 2)
- quality assurance and records (Heysham 2)
- security

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.

In this period, other routine matters at Heysham stations covered the following:

- early Reactor 2 statutory outage safety review (Heysham 1)
- equipment reliability reviews (Heysham 1)
- regulatory issue progress (Both sites)
- emergency exercise planning (Heysham 1)
- end of generation preparations (Heysham 1)
- management of change (Heysham 1)

- organisational learning (Heysham 1)

2.2. Other Work

Heysham 2, Reactor 7 was shut down in March 2022 to refuel under offload depressurised conditions. During this refuelling outage, graphite inspections of thirteen fuel channels of the core were undertaken as previously agreed with ONR.

These inspections found three new Keyway Root Cracks (KWRCs), meaning that a total of four KWRCs have been observed in Reactor 7 so far (i.e. three newly observed and one previously observed). In a couple of these cases, cracks were observed in adjacent layers induced by these KWRCs; a total of three induced cracks were observed. In addition, a defect near brick end, associated with the existing KWRC, was observed. This was described as a 'proto fragment' consistent with predictions of potential seal ring groove wall (SRGW) cracking formation.

Prior to return to service in April 2022, the safety case for the graphite core was updated to account for the observations and accepted by ONR. Further safety case updates for the graphite core as it ages are being made and ONR is tracking the progress of these cases and will place regulatory hold points as required.

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.

There were no events of significance at Heysham 1 or Heysham 2 during the period.

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.

The preface to Heysham 2’s maintenance schedule was previously approved by ONR, meaning that any changes to the schedule needs ONR permission. Changes to the maintenance schedule preface for Heysham 2 were given approval by ONR via Licence Instrument LI 636 on 15 February 2022 following ONR assessment. The changes will grant the licensee small extensions of up to 3 months to the statutory outage date if the reactor has not been operating at power for 1095 days or more without a Licence Instrument from ONR. *(Previously the statutory outage was three calendar years from the date of ONR Consent even if the reactor had not been used but extensions to the date were often granted following assessment and permission from ONR.)*

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
15/02/2022	Approval	LI636	Heysham 2 - LC28(5) approval of their maintenance schedule preface issue 17

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

5. News from ONR

For the latest news and information from the Office for Nuclear Regulation, please read and subscribe to our regular email newsletter 'ONR News' at www.onr.org.uk/onrnews

6. Contacts

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This document is issued by the Office for Nuclear Regulation (ONR). For further information about ONR, or to report inconsistencies or inaccuracies in this publication please visit <http://www.onr.org.uk/feedback.htm>.

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