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Office for Nuclear Regulation (ONR)

Site Report for

Torness Power Station

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 Torness and are also available on the ONR website (http://www.onr.org.uk/llc/).

Site inspectors from ONR usually attend Torness 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 carried out licence condition (LC) inspections on the following dates during the report period:

Torness

22 – 23 March

24 March

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

16 – 17 February (Systems Based Inspection, Heating and Ventilation systems)

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 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 at Torness covered the following:

- Emergency Arrangements
- Training
- Operating Rules
- Operating Instructions
- Safety Mechanisms, Devices and Circuits
- Examination, Inspection, Maintenance Testing
- Leakage and Escape of Radioactive Material and Radioactive Waste

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.

2.2. Other Work

Make-up Shields Torness

We continue to attend meetings with the site and attendees from their central support organisation to discuss proposals for modifications to the make-up shields (MUS) on Reactor 1 and Reactor 2 that could potentially allow exchanges of control rods and

fuel whilst the reactor is pressurised. These operations are currently embargoed and are undergoing EDF NGL safety case anomalies process.

A revised safety case will be required before the MUS can be operated at pressure. We have placed a regulatory hold point and will permission the revised safety case. Indications are that the safety case and associated modifications will not be complete until the end of 2022.

Graphite Torness

During the Reactor 1 offload depressurised refuelling campaign in early 2022, NGL identified and formally sentenced 2 keyway route cracks, the detection of these keyway route cracks are in line with NGL's predicted forecasts.

ONR are content with the graphite inspection strategy for Torness Reactor 1 and will continue to engage with NGL and monitor the graphite inspection programme, the next Reactor 1 Graphite inspections are scheduled for August 2022.

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:

Torness

Reactor 1 Quadrant Trip – 13 March 2022

On 13 March Reactor 1 experienced an alpha quadrant trip in response to a feed transient, the reactor auto control system responded to the trip as expected and the reactor remained at power at a reduced level.

The reactor remained on three quadrant operations while the cause of the feed transient was investigated. The cause of the feed transient was found to be related to a faulty control computer component. The component was replaced and the 1 alpha quadrant reconnected and power restored to nominal full load on 16^{t} March.

1A Instrument Air Compressor – 21 March 2022

On 21 March there was two coincidental plant faults which occurred leading to the 1A Instrument Air Compressor overheating resulting in a localised fire, the fire was identified quickly and was extinguished by use of fire extinguishers.

The onsite shift fire team also responded to the plant fire alarm, once extinguished a fire watcher was put in place to monitor the area and ensure there was no further risk of fire.

There was no damage caused to adjacent plant and equipment, the damaged panel has been cordoned off, initial learning briefs have taken place and an investigation is underway which will prompt any further action required.

RIDDOR Reportable Incident

On 16 March an incident occurred in the Reactor 2 oxygen distribution header – oxygen storage compound. A quarter inch diameter threaded metallic fitting on an oxygen valve coupling sheared unexpectedly resulting in the release of oxygen at around 50 barg pressure.

The valve is situated in a locked compound with restricted access and no persons were in the area at the point of release. As a result of this incident, and in line with regulations, a RIDDOR was submitted relating to a dangerous occurrence regarding damage to or failure of a pipeline or ancillary equipment.

The area has been quarantined and station are undertaking an investigation into this incident, similar valves on the system have been visually inspected and there are no signs of degradation or leakage.

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.

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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Published 06/22

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