Office for Nuclear Regulation (ONR)
Site Report for
Torness Power Station

Report for period 1 January - 31 March 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 quarterly to members of the Local Community Liaison Committee and are also available on the ONR website (http://www.onr.org.uk/llc/).

Site inspectors from ONR usually attend the Torness Local Community Liaison Committee meetings and will respond to any questions raised there. Any person wishing to enquire about matters covered by this report should contact ONR.

Table of Contents

1 Inspections

Dates of inspection

ONR inspectors undertook interventions relevant to Torness Power Station on the following dates during the report period:

- 16 – 18 February 2021

In addition, the site inspector and other ONR specialist inspectors were involved in interventions on the following dates during the quarter as part of the Reactor 1 statutory outage:

- 4, 9 – 10, 19, 26, February (Remotely)
- 16 – 17 February (On-Site)
- 4, 9 – 17, 24 March (Remotely)
- 1 – 2, 9 March (On-Site)

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 the licensee's, EDF Energy Nuclear Generation Ltd's (EDF NGL) 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, the following compliance inspections were undertaken:

- A Licence Condition (LC) 7 "Incidents on Site".

LICENCE CONDITION 7 – INCIDENTS ON THE SITE

The purpose of LC7 is to ensure that incidents on the site are notified, recorded, investigated, and reported by the licensee. ONR anticipates that only incidents with the

potential to have an adverse effect on safety are notified to us. The inspection sampled the adequacy of NGL's arrangements for the management of investigations and the management of actions generated by investigations. The inspection observed the activity of the 'Corrective Action Review Board' (CARB), an NGL governance body utilised to accept, challenge or reject proposals for the closure of investigation actions. ONR observed positive challenge from the attendees at the CARB meeting where a number of action closure proposals were challenged, promoting discussions on resolution and appropriate way forward to enable actions to be closed out appropriately.

From the evidence sampled ONR was content with management of investigations and the management of actions generated by investigations. There were no regulatory issues generated from the inspection and ONR judged that NGL adequately demonstrated compliance with the requirements of LC7 and therefore rated this inspection as Green, no formal action.

STATUTORY OUTAGE INSPECTIONS

ONR completed a number of Reactor 1 outage inspections in this period covering the following disciplines:

- Project Inspector (Remote)
- Structural Integrity (On-Site)
- Civil structures (Remote)
- Graphite (Remote)
- Control and Instrumentation (On-Site)
- Electrical (Remote)
- Mechanical (Remote)
- Conventional Health and Safety (Onsite)
- Radiation Protection (On-Site)
- Written Schemes of Examination assessment as required by the Pressure Systems Safety Regulations 2000 (PSSR) (Remote).

Any issues revealed during ONR inspections were satisfactorily addressed and there were no implications for the return to service of Reactor 1. Some minor matters will be followed up by ONR through routine regulatory business.

ONR's assessment and inspection of the Torness Reactor 1 periodic shutdown confirmed that NGL had carried out examinations, inspections, maintenance and testing in accordance with the requirements of its Plant Maintenance Schedule. Work had been conducted to the required quality standards and by competent personnel. No issues of such significance were identified by NGL or ONR that would prevent the safe start-up of Torness Reactor 1 and ONR bsequently granted permission for restart.

System Based Inspection (SBI)

SBIs consist of a series of inspections which are intended to establish that the basic elements of a site/facility safety case, as implemented in Safety Systems and Structures (SSS) are fit for purpose and that they will fulfil their safety functional requirements. In an SBI, the adequacy of implementation of the licensee's arrangements for six Licence Conditions (LC) (10, 23, 24, 27, 28 & 34) is tested for the SSS chosen.

In this period, no system-based inspections were undertaken.

Other work

Exercise Demonstrations

ONR and EDF NGL have confirmed that the emergency exercise demonstrations which were postponed due to COVID-19 pandemic restrictions in 2020 will be undertaken during May and July 2021. The delivery of the revised exercise demonstration plan will be continually monitored in line with any changes to the COVID 19 restrictions.

Other Meetings

Due to travel restrictions being imposed during the previous reporting periods in 2020 due to COVID-19, the site inspector worked remotely to monitor the performance of the site by:

- Initiating increased dialogue with site management, the licensee's independent nuclear safety assurance function, and trade union safety representatives to develop a consistent picture of the measures put in place to manage the safety of both the workforce and the plant.
- Observing the meetings and working groups the licensee established to assess the coronavirus pandemic and manage the response, including the pandemic lead team meeting (which co-ordinated the site's response) and maintenance requirements review group (which managed the impact of potential or actual staff and supply chain shortfalls on safety-significant maintenance activities).
- Monitoring the minimum staffing levels required to deliver an adequate response in the event of an accident or emergency on the site.

However, in this reporting period, the site inspector has taken the opportunity to carry out site visits in January and March in line with COVID-19 arrangements. The duration of the station visits has been kept to a minimum and focused on plant walkdowns and other activities, mainly associated with the 2021 statutory outage and follow up to reportable incidents which ONR are unable to conduct remotely.

The site inspector considers that the site has managed its response to the pandemic during the period in a manner that, so far as is reasonably practicable, protected its own staff and ensured that there was no degradation in nuclear safety.
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3 Non-Routine Matters

The Torness nominated site inspector reviews incidents that meet the criteria for routine reporting to ONR under the site Licence Condition 7 arrangements. The site inspector samples the station's follow up reports and corrective actions.

Matters and events of particular note during the period were:

Events

- INF1 2021/191 – Shortfalls were identified by licensee's assessment work on the fuelling machine safety cases at Torness & Heysham 2 for Low Pressure Refuelling, Off-load Pressurised Re-fuelling, and Off-load Depressurised Re-fuelling.

  Both stations have entered the safety case anomalies process and are working their way through justifying continued pressurised operations using their fuelling machines. Until continued operations are justified, pressurised refuelling operations are embargoed.

- INF1 2021/114 – Secondary shut down system on Reactor 1 "New" routine test to measure Nitrogen injection rate indicated lower than expected flow rate when N2 storage vessel pressure is at the lower end of allowable window.

  Torness entered their safety case anomalies process and produced an Interim Justification for Continued Operations which was approved through due process. An engineering change is currently being undertaken to justify operations in the longer term.

- INF1 2021/79 - During the statutory outage, 1B decay heat boiler was returned to Operations control and claimed as available without the fasteners on the end flange having been hydraulically-tensioned.

  When the error was reported the 1B decay heat boiler had been nitrogen-capped, so a leak check was carried out in case of local oxygen depletion; no leakage was found. The boiler was released and isolated, and the end flange fasteners were tensioned correctly.

  Torness informed the ONR site inspector that although the system was declared available it was not made operational, and the required torque settings had now been completed. Torness are currently investigating this incident.

- INF1 2021/63 - During testing of safety circuits on the shutdown reactor, two channels of the auxiliary guard lines were inadvertently placed in the trip condition at the same time, leading to the supplies to the Safety Regulating Group (SRG) control rods being removed and the rods inserting into the core.

Testing was suspended and the auxiliary guard lines reset to healthy status, normal configuration of plant was reinstated, and an investigation is being undertaken into the incident by Torness.

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 issue Enforcement Notices to secure improvements to safety.

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

Date	Type	Ref No	Description
15/04/2021	Consent	TOR71435N	LI Number 562, Consent to the re-start of Torness reactor 1 following statutory outage.

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

5 News from ONR

Below are summaries of key activities in the period covered by this report. 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. As COVID-19 restrictions change, our focus is on the preparedness for the weeks and months ahead and maintaining safe and secure operations. Our latest position can be found on our website.

ENFORCEMENT ACTION

- In January, we agreed to extend two Improvement Notices served on the Atomic Weapons Establishment (AWE), recognising the good progress made so far. The Notices, which were served in June 2019, relate to the way the company controls changes to organisational structure and resources which may affect safety.

- In January, we served an Improvement Notice on Sellafield Ltd following a number of electrical safety incidents across the site. While we are satisfied that Sellafield Ltd is currently meeting the high standards expected with regards to nuclear safety, as a regulator we require sustained improvements in the area of electrical safety.

- In February, we served an Improvement Notice on Morgan Sindall Construction and Infrastructure Ltd after workers came close to striking a live high voltage electric cable during excavation work at the Sellafield site. Nobody was harmed in the incident on 7 October 2020, and there was no impact on the public or the environment. However, the incident posed a serious risk to workers who were operating within one metre of the 11kV cable.

Regulatory Updates

- In March, we published a response on our website to a BBC report relating to Sellafield. We were naturally concerned to hear the claims, particularly any suggestion that staff have been subjected to racist abuse of any kind. As a regulator, if we had any concerns or evidence that bullying and harassment was impacting safety at the site, we would take robust action to ensure this is addressed as a matter of urgency.

- In March, we published an article about how we responded to the serious nuclear accident at the Fukushima Dai-ichi nuclear power plant in 2011 to mark the 10th anniversary.

- In March, we gave EDF permission for Reactors 3 and 4 at Hinkley Point B power station to return to service for a limited period of operation. Permission for Reactor 3 will allow it to operate to a core utilisation of 17.55 terawatt days, while permission for Reactor 4 is to operate to a core utilisation of 17.3 terawatt days, which equates to two periods of approximately six months operation for each reactor.

Stakeholder Engagement

- In February, we encouraged interested parties to take part in a Nuclear Energy Agency (NEA) survey about building and maintaining trust between nuclear safety regulators and the stakeholders they engage with.

- In February, we provided an update about the leadership structural changes we initially announced in December 2020. Under existing contractual arrangements, current Chief Executive Adriènne Kelbie CBE was always expected to step down as her extended term of office comes to an end in January 2022. Mark Foy will step into the new combined role on 1 June 2021, when the new leadership structure will come into full effect.

- In February, we announced that we had appointed Donald Urquhart to the newly-created role of Executive Director of Operations, which will form part of our new leadership structure. As Executive Director of Operations, Donald will be responsible for leading our regulatory work.

- In March, we announced that as part of our new leadership arrangements, we had appointed three new deputy chief nuclear inspectors (DCIs) to our regulatory and senior leadership teams: Jane Bowie, Paul Dicks and Steve Vinton, currently all senior superintending inspectors at ONR. All three new DCIs have a strong track record of delivering regulation across the organisation, and will help us maintain a focus on our Strategy 2020-25.

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