Office for Nuclear Regulation (ONR)

Site Report for

Torness

Report for period 1 July to 30 September 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 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

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

- 27 – 28 July 2021
- 11 - 12 August 2021
- 14 - 16 September 2021

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, 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 and theme based inspections were undertaken:

LICENCE CONDITION 11 – EMERGENCY ARRANGEMENTS

We observed a 'Level 1' emergency exercise 'Everest' the purpose of which was to demonstrate that arrangements for emergency response, required by Licence Condition (LC) 11, are adequately implemented.

Exercise Everest was designed to test the response to a site incident relating to a significant chemical tanker spillage leading to damage to plant and subsequent reactor trip. As is normal, the shift team taking part was unaware in advance of the details of the exercise scenario, which in this case included multiple casualties and missing person which prompted a security inject to the exercise.

We judged that the exercise scenario was suitably testing. However, on this occasion judged that the station would not have coped adequately with this emergency. For this exercise, due to COVID concerns, the external emergency services did not participate which added additional issues regarding assistance and advice in dealing with the scenario at the incident area. On this occasion station failed to meet a number of their objectives set out for this Level 1 emergency exercise and have been requested to provide a redemonstration at a mutually agreed timescale with ONR. The main focus areas for the redemonstration should include the following:-

- Effective Command and Control.
- Location, assessment, rescue and treatment of casualties.
- Assessment of conditions in damage areas made by teams and appropriate measures taken to control hazards while minimising risk to team members.
- Provision of control to chemical risks, providing both advice and reassurance on and off-site.

- Timely and effective implementation of a repair/recovery strategy.
- Other interventions included the follow-up of electrical incident where damage was caused to an electrical panel, we are content that the initial action taken was appropriate and will track further progress through follow up interventions.

CHEMISTRY THEME BASED INSPECTION

EDF NGL has previously made commitments to implement chemistry technical governance in station safety case documentation. Within the chemistry function, technical governance documents are known as British Energy Operating Manuals (BEOMs). A number of other Company Technical Standards (CTS) technical governance documents are also of relevance to chemistry. The production of technical governance is driven by the Central Technical Oversight (CTO) function at Barnwood; this has been the subject of previous inspections across the fleet. Technical governance revision, however, requires station input and implementation of technical governance is the responsibility of stations. The input of station to technical governance revision and subsequent implementation formed the focus of this intervention. The inspection was therefore focused on the following LCs:-

- LC 14 (SAFETY DOCUMENTATION)
- LC 23 (OPERATING RULES)

Based on ONR's experience of areas of challenge across the fleet, the inspection was targeted towards primary coolant chemistry, offload secondary coolant chemistry, ponds chemistry and the control of biofouling of sea water cooling systems.
We have also recently raised a challenge on the scope of event reporting within the chemistry function at EDF NGL and therefore sampled station processes for event reporting during the inspection. We also sought evidence of the application of new guidance produced by CTO within the chemistry function, to ensure effective learning from experience (LFE) in line with LC7 and Safety Assessment Principle (SAP) MS.4.

Based on our sample, we are content that the station is appropriately providing input to the revision of technical governance. The station was able to identify and describe relevant processes for technical governance revision and forums for their input to this. We observed active input from the station with regards to the update of BEOMs sampled during the inspection.

We sampled the key chemistry aspects of the safety case, including operating rules in the areas of primary coolant chemistry, offload secondary coolant chemistry and ponds chemistry, as well as the relevant chemistry compliance data. From the sample, we judged chemistry control compliance with technical governance to be adequate. We also sampled the station's implementation of technical governance into the station safety case, which was found to be adequate.

We sampled the station's event reporting process from a chemistry perspective. On the basis of the discussions held, we were content that the station is appropriately raising condition reports (CRs) to enable effective trending of chemistry events. I also observed evidence of learning from experience (LFE) as well as examples of the station feeding relevant experience back to the fleet. We were content that there is

increased awareness of event reporting requirements via the INF1 route for chemistry-related events, as a result of previous ONR engagement on this topic.

LICENCE CONDITION 28 – EXAMINATION, INSPECTION, MAINTENANCE AND TESTING

This inspection was against LC28 – Examination, inspection, maintenance and testing. This inspection was the third themed LC28 inspection (across the fleet), examining the adequacy and comprehensiveness of different aspects of the maintenance management system.

The inspection focused on the availability and quality control of spares and parts, the storage of spares and parts and the calibration and storage of maintenance tools and equipment. The inspection comprised of discussions with the licensee staff, an inspection of the stores and a review of the licensee's documentation and arrangements.

We examined the stations arrangements for the procurement of spares and parts. We were satisfied that the licensee has appropriate arrangements in place to ensure the availability of spares and parts and that a suitable graded approach to quality assurance is applied. Where spares or parts were out of specification, we were content the licensee has adequate arrangements in place. We sampled a number of records and considered that the arrangements have been adequately implemented. We examined the station's arrangements for the calibration of maintenance tools and equipment. The licensee was able to demonstrate that these items are calibrated and appropriately controlled to ensure they are only used within their period of calibration validity.

We inspected the stores and were content with the condition of the stores and that appropriate environmental conditions are available for equipment that requires it. We were content that the licensee was able to demonstrate appropriate controls for the receipt and issue of items.

From the areas targeted and the evidence examined during the inspection, we considered that the station has adequate arrangements for the systematic examination, inspection, maintenance and testing of all plant which may affect safety. They demonstrated adequate implementation of the arrangements relating to spares and the use of maintenance tools and equipment.

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.

3. Non-Routine Matters

The Torness nominated site inspector reviews incidents that meet the criteria for routine reporting to ONR under the site LC7 arrangements. The site inspector samples the station's follow up reports and corrective actions.

Matters and events of particular note during the period were:

INF 2021/647 - Inadvertent Trip of Aux Guardlines/SRG1S

- During setting of flux protection on the shutdown reactor prior to start up, two channels of the auxiliary guardlines were inadvertently placed in the trip condition at the same time. This led to the supplies to the Safety Regulating Group (SRG1) control rods being removed and the rods inserting into the core.

- Flux protection setting was completed on remaining channels, auxiliary guardlines were reset to healthy status, control rod clutch supplies reinstated and SRG1 rods withdrawn from the core to normal configuration.

INF1 2021/604 -2DX2 Gas Circulator VFC incident follow up

This event was reported during Q2 however follow-up enquires were conducted during July. The following were all confirmed:-

- The safety case requirements had not been breached and there were no significant nuclear safety implications.
- All live work on the VFC's is embargoed until the incident was investigated and a full review of the safe systems of work is undertaken.
- A programme of work is underway to determine the root causes of the incident, and how station will progress the safe replacement of the panel as it is rendered inoperable due to the damage caused.

INF1 2021/191 - Make-up Shield

The technical investigation has continued. 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 2022. Until this time all refuelling operations will take place whilst the reactor is shutdown and depressurised.

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

Enforcement action

- In July, we served an improvement notice on Devonport Royal Dockyard Ltd (DRDL) for shortfalls in its health and safety arrangements. The notice was served after DRDL failed to demonstrate consistent and effective arrangements to control and monitor the risks associated with working at height at its Devonport site. DRDL must comply with the requirements of the improvement notice by 31 March 2022.

- In August, we announced that Morgan Sindall Infrastructure Ltd had complied with an improvement notice served in January 2021 after workers came close to striking a live high voltage electric cable during excavation work at the Sellafield site.

COVID-19: 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; there has been no significant change to dutyholders' safety and security resilience.

- We have measures in place to try and prevent asymptomatic ONR staff unwittingly conveying the virus onto a regulated site. We require all staff to take a circular 1 health (C1H) antigen test in advance of them visiting a site. In addition to the C1H test, we also require them to take a lateral flow test on the morning of their planned site visit. We are keeping our COVID-19 testing guidance under regular review, in-line with the changing national context and any further developments in industry approaches to testing arrangements.

Other

- In July, our project to become the UK's domestic safeguards regulator was named the public sector's Project of the Year at the National Project Awards.

- In September we invited stakeholders to submit comments on our updated reference papers for Coastal Flood Hazards and Meteorological Hazards for Nuclear Sites. Although supplementary to our normal governance process, we are doing this due to stakeholder interest in these topics and our commitment to being an open and transparent regulator.

  The reference papers provide additional detail on the analysis of the external hazards for nuclear sites and have been produced by our Expert Panel on Natural Hazards, a group of academic and industry technical specialists working under contract to provide us with independent expert advice. You can find out more about how to get involved and comment on these papers on our website.

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

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Published 01/22

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