

Office for Nuclear Regulation (ONR)

Site Report for Hunterston B

Report for period 1 April – 30 June 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 Hunterston Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/llic/>).

Site inspectors from ONR usually attend Hunterston Site Stakeholder Group 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 inspectors and specialist inspectors made inspections at the Hunterston B (HNB) site on the following dates during the report period 1 April – 30 June 2022:

- 3 May 2022
- 18 – 19 May 2022
- 25 May 2022
- 1 June 2022
- 14 – 16 June 2022
- 28 June 2022

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 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 Fire (Scotland) Act 2005;
- The Nuclear Industries Security Regulations (NISR) 2003;
- The Nuclear Safeguards (EU Exit) Regulations 2019 (NSR19).

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 HNB covered the following:

- LC 22 - Modification or experiment on existing plant;
- Security – Regulator evaluated demonstration exercise;
- LC 11 - Emergency arrangements – demonstration exercise;
- LC 34 - Leakage and escape of radioactive material and radioactive waste;
- IRR17;

For the LC Inspections the site inspector and specialists judged that the arrangements made and implemented by the site in response to safety requirements were adequate. Specialist electrical engineering inspectors confirmed the effectiveness of the control rods and pressure vessel cooling water system isolations. The site inspector confirmed that a rigorous approach is being applied to the process to isolate and reduce the hazard from operational plant that is being retired from service as it no longer supports reactor safety or is required for defuelling operations. The security site inspector evaluated exercise Clyde and rated the demonstration as not adequate under NISR. Some improvements are in progress and a re-demonstration exercise has been planned. The site safety inspector evaluated exercise Vulture, which was the annual LC11 demonstration exercise. Whilst several aspects of the emergency response went well, the exercise was rated as not adequate. The station did not fully confirm the nuclear safety status of the fuel route plant and the time to recover and treat some casualties was excessive. A commitment to re-demonstrate the station emergency arrangements has been made. A specialist radiological protection inspector inspected compliance against LC34 and IRR17 with a focus on the fuel route. The inspection did not reveal any significant nuclear safety concerns and a rating of green (no formal action) was assigned for the inspection.

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

The site inspector held periodic meetings with safety representatives and the EDF internal regulation team, to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work and to provide internal challenge on nuclear safety matters.

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.

Licence Condition (LC) 7 requires licensees to make and implement adequate arrangements for the notification, recording, investigation and reporting of incidents occurring on the site. During this period, the site inspector reviewed incidents that met the criteria for routine reporting to ONR. The site and specialist inspectors also sampled the station's follow up reports and corrective actions. From the evidence sampled, the inspector was satisfied that the events reported during the period, had been adequately investigated and appropriate event recovery actions identified. Matters and events of particular note during the period were:

- On 14 April 2022, it was reported that the in-service inspection (ISI) safety case, which justified the removal of some post operational inspection requirements on a number of reactor pressure boundary components, was inconsistent with the Defuelling safety case assumptions. The Safety Case Anomaly Process (SCAP) was applied which has confirmed that the current safety case position was secure. As this was a repeat event, where inconsistencies have been identified between the ISI and Defuelling safety cases, a commitment has been made to conduct an Apparent Cause Investigation (ACIN) to discover the extent of condition and establish the lessons learned. No members of the public or workers were placed at increased risk from this event.
- On 6 May 2022, during a routine test run of a dump condenser extract pump, flames from the pump motor were reported by an operator and the installed pump protection system tripped the motor which extinguished the fire. The event was automatically reported to the control room and fire extinguishers were used to cool the pump and eliminate further smouldering. Scottish Fire and Rescue Service attended site and confirmed no fire was present. The site inspector confirmed that the fire response procedures were followed appropriately and all persons were accounted for. As this is a repeat event, a forensic strip down of the pump was performed which will inform the investigation of the event. No members of the public or workers were placed at increased risk from this event.
- On 6 June 2022, when transferring an empty fuel transport skip from a flask within the fuel storage pond, the skip manipulator did not stop as expected and collided with an adjacent empty skip. The event was due to a limit switch failing to operate. The site inspector has followed up on this event; an equipment failure investigation has been carried out and enhancements to the skip manipulator inspection and testing procedures are planned along with a plan to recover the displaced empty skips. No members of the public or workers were placed at increased risk from this event and defuelling operations have not been unaffected.
- On 16 June 2022, it was reported that a maintenance inspection to carry out functional checks of overload and underload protection switches on the charge machine hoist had not been carried out as scheduled. The checks are completed prior to commencement of each defuelling batch, of 20 fuel channels, and have a validity period of 35 days. Due to some delays to the defuelling programme the 35-day period was exceeded.



The site inspector has followed up on this event. The station and fuel route design authority were satisfied that all subsequent tests of the switches were within tolerance and there was no compromise to the safety function of the charge machine hoist. The causes of the event are being investigated and the plant maintenance schedule has been updated. No members of the public or workers were placed at increased risk from this event.

- On 25 June 2022, work was being carried out on a ventilation system that discharges CO₂ from the gas circulators to the main gas relief stacks. The work was being carried out as part of the Reactor 4 defuelling outage. Following completion of the invasive works and close out of the safety document, it was identified that a flange had not been re-connected. If a subsequent alignment check had not identified the fault, it could have resulted in the gas circulators pumping contaminated CO₂ directly into the Reactor 4 Circulator Hall. Appropriate immediate actions have been taken to re-apply the isolations and an extent of condition survey has been carried out and no further anomalies were identified. The event has been categorised as a significant safety rules contravention and a significant adverse condition investigation is in progress. No members of the public or workers were placed at increased risk from this event and the site inspector intends to review the investigation findings once station has completed its investigation.

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 including issuing an Enforcement Notice.

- No LIs, Enforcement Notices or Enforcement letters were issued during this period.

Reports detailing previous 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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