

Office for Nuclear Regulation (ONR) Site Report for Hunterston B

Report for period 1 October to 31 December 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 Hunterston B Site Stakeholder Group (SSG) and are also available on the ONR website (<http://www.onr.org.uk/llc/>).

Site inspectors from ONR usually attend Hunterston SSG 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, supported by specialist inspectors, made inspections on the following dates during the report period 1 October to 31 December 2021:

- 19 - 21 October 2021
- 16 - 18 November 2021
- 14 - 16 December 2021

ONR's civil nuclear security inspector usually undertakes quarterly inspections at Hunterston B:

- The site security inspector carried out an inspection on the 7 December 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), the Management of Health and Safety at Work Regulations 1999 (MHSWR99), the Radiation Emergency Preparedness and Public Information Regulations 2019 (REPPPIR) and The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG);
- 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 station covered the following:

- Control of Major Accident Hazards Regulations 2015 (COMAH).
- NISR2003 – Nuclear Security.
- LC7 – Incidents on site.

During the reporting period, ONR judged the arrangements made and implemented by the site in response to safety requirements to be satisfactory in the areas inspected. Where improvements have been identified, the licensee has made a commitment to address those issues, and ONR inspectors will closely monitor progress during future site inspections. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

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.

COMAH – On the 21 October specialist conventional health and safety inspectors carried out an inspection against the COMAH requirements to control the hazardous substance inventory on site and to review the arrangements to reduce the inventories during defueling. The inspection confirmed a structured approach, using the engineering change modification process, will be used to remove specific hazardous substances and associated major accident hazards at the earliest opportunity during defuelling. Hazardous substance storage and off-loading facilities were also inspected and a good standard was observed, but with some minor areas for improvement. An inspection rating of Green, no formal action was therefore assigned to the inspection.

NISR2003 – On the 7 December the security inspector carried out an observation of a Civil Nuclear Constabulary (CNC) Response Model Training exercise. The inspector observed a number of exercise scenarios and provided feedback on the areas of strength as well some opportunities for improvement. The observation was not formally rated.

LC 7 – On the 16 December the nominated site inspector, with support from the conventional health and safety inspector, carried out an inspection of incidents on the site. The Operational Experience (OE) Investigation process was examined to determine whether the direct and root causes of events had been applied, that corrective actions deemed necessary to prevent recurrence were being identified and that the lessons for similar plant or operations had been identified. The inspection confirmed that station is following its OE Investigation process adequately. There are some opportunities to increase the learning extracted from the investigation of events, which have potential to inform the plant configuration control programme during the defuelling phase. A rating of Green, no formal action, was therefore assigned to the inspection.

In addition to our routine compliance inspections, ONR inspectors also inspect operating reactors against safety-related systems. Each site has a safety case that demonstrates how it operates safely. For advanced gas cooled reactors, each of approximately fifteen

key systems are inspected against the claims made upon them by the safety case. The aim is to systematically inspect all the significant safety related systems within a five-year cycle (three per year). ONR believes that this will provide more robust assurance of the site's safe operation and how the safety case is being implemented.

- There were no system-based inspections during the reporting period.

ONR also carries out themed inspections which seek to evaluate the effectiveness and consistency of implementation of the licensee's processes and procedures. These inspections are carried out at the site, across the EDF fleet and, in some cases across other licensees.

- There were no theme inspections during the reporting period.

2.2 Other work

The site inspector held periodic meetings with safety representatives and the EDF internal regulation team, to support their functions 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 9 November a maintenance technician received a minor hand injury during the operation of a pressure testing vessel used for fuel plug units. This was a conventional health and safety matter and there was no risk to members of the public. ONR reviewed the site investigation and noted that inadequate staff training and the absence of a detailed safe system of work were identified as principal causes. ONR noted some further learning could have been identified from this event through use of HSE publication 'Safety requirements for pressure testing', including the

importance of adequate supervision to ensure staff follow the Safe System of Work.

- On 20 December 2021 a discrepancy with flux detector accountancy records was reported. Flux detectors are used to measure the neutron flux within the reactors. They are categorised under the Nuclear Safeguards Regulations as Non-Fuel Fissile Material (NFFM) as the detectors contain a very small quantity of enriched uranium. The number of flux detectors held on site and their NFFM weights recorded on the nuclear material accountancy system did not align. An investigation is ongoing and the safeguards inspector will follow this up when the investigation report becomes available.

End of generation at Hunterston B.

- On 26 November 2021 Reactor 3 ceased operating after its final period of safe and compliant operation. The reactor was safely shutdown with all necessary post trip cooling established and it is now undergoing its pre-defuelling outage. ONR is currently assessing the reactor shutdown and defuelling safety cases and we will issue our agreement to the commencement of defuelling once we are satisfied with the safety cases.
- Post reporting period – Reactor 4 ceased operating on the 7 January 2022 and has been safely shutdown with all required post trip cooling established. Reactor 4 will commence defuelling once Reactor 3 has been defuelled.

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 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
13/12/21	Licence Instrument	LI 573	ONR agreed to the safety case for the 'declassification of the reactor pressure boundary and associated systems for the post generation phase', ONR-OFD-PAR-21-011. During defuelling the reactor pressure vessel is held at a lower pressure and temperature, this brings and number of safety benefits and reduces the maintenance and inspection requirements.

Reports detailing 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 02/22

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