

Office for Nuclear Regulation (ONR) Site Report for Hinkley Point B Power Station

Report for period 01 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 Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/llc/>).

Site inspectors from ONR usually attend 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

Dates of inspection

The ONR site inspector made inspections on the following dates during the report period:

- 12 to 15 July 2021 (LC23 and 24)
- 23 to 26 August 2021 (System Based Inspection of Fuel Route)
- 15 to 16 September 2021 (Level 1 Emergency Exercise)

In addition, ONR specialist inspectors undertook inspections on the following dates during the quarter:

- 23 to 26 August 2021 (System Based Inspection of Fuel Route)
- 15 to 16 September 2021 (Level 1 Emergency Exercise)

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 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 Hinkley Point B covered the following:

Management of Operations

This inspection covered LC23 (Operating Rules) and LC24 (Operating Instructions). The aim of this inspection was to confirm that operations that may affect safety have limits and conditions identified to ensure that the station is kept in a safe condition and that those limits and conditions are adequately identified in Operating Instructions. The inspection focussed on the fuel route.

The site was broadly compliant with the requirements of the licence conditions sampled. Some areas of good practice and some minor areas for improvement were identified. None of the areas for improvement identified were significant enough to warrant a formal issue being raised.

System Based Inspection of the Fuel Route

This system based inspection examined evidence to judge the dutyholder's compliance against six key Licence Conditions (LCs), selected to determine whether the safety case requirements of the system concerned are adequately implemented, and safety systems and structures are fit for purpose and will fulfil their safety functional requirements. The licence conditions assessed were: Licence Condition 10 (Training), Licence Condition 23 (Operating Rules), Licence Condition 24 (Operating Instructions), Licence Condition 27 (Safety Mechanisms, Devices and Circuits), Licence Condition 28 (Examination, Inspection, Maintenance and Testing) and Licence Condition 34 (Leakage and Escape of Radioactive Material and Radioactive Waste).

The inspection was conducted by a mechanical engineering inspector and nuclear associate. The external transport route and railhead inspection was conducted by the nominated site inspector, and specialist inspector for security and human and organisational capability. The inspection focussed on the fuel export route, in preparation for the stations transition to defuelling operations in 2022. The following fuel route systems were sampled:

- Fuel Storage Ponds (FSP)
- Active Effluent Treatment Plant (AETP)
- Flask Handling Facilities
- Fuel Export Route up to the Bridgewater Rail Head

The inspection comprised discussions with the licensee staff, a review of the licensee's records, safety documentation and physical walkdown of plant areas on the station and on the external transport route.

From the areas sampled and the evidence I examined during this inspection; I consider that the licensee has adequately implemented the safety case claims relating to the Fuel Route Systems. I am content that the areas of the system I sampled are inspected, maintained, and operated in accordance with the safety case. I identified minor areas of improvement which I did not consider prejudice overall nuclear safety.

Based on my sample, I judge that the Fuel Export Route (System 09) met the requirements of the safety case, with areas for improvement noted. The inspection findings were shared and accepted by the licensee during the feedback session. I shared regulatory observations and recommendations with the licensee which will be followed up by the nominated site inspector as part of normal regulatory business.

I judge the licensee adequately demonstrated ownership and implementation of its safety case. In addition, it demonstrated an adequate understanding of its arrangements to ensure and maintain the safety of its Fuel Route systems.

Level 1 Emergency Exercise

The nominated site inspector for Hinkley Point B Power Station, supported by a team of ONR specialist inspectors, observed a Level 1 emergency demonstration exercise rated against Licence Condition (LC) 11 – Emergency Arrangements. The scenario was agreed in advance by ONR. The demonstration was carried out under COVID-19 restrictions so there were limits in force for the number of personnel in any location.

There was a strong nuclear safety focus and the exercise provided an adequate demonstration of Hinkley Point B Power Station's emergency arrangements and I awarded a rating of Green against LC11. However, there were a few points of learning that were discussed during the feedback that the station should consider. These were:

- The scenario must be appropriate to enable the exercise objectives to be achieved;
- The station muster was slow and should be re-demonstrated through a Shift Exercise;
- Information flow between casualty recovery teams and the first aid facility staff needs improvement

Additionally, there were 2 fleet-level learning points:

- It would be very beneficial if the Pond Water Package Cooler (PWPC) training course included the opportunity for SERT members to gain first-hand experience of operating the equipment;
- It was agreed that ONR would send an inspector to witness the testing of the PWPC equipment and demonstration of its capability.

I considered the demonstration to have provided an adequate demonstration of Hinkley Point B's emergency arrangements and awarded a rating of Green against LC11.

There were a few significant observations during the exercise that will be taken forward by the station as learning points to enhance and improve the implementation of their emergency arrangements. One Fleet-level issue is being raised to capture the agreement that ONR would send an inspector to witness the testing of the Pond Water Package Cooling equipment and demonstration of its capability.

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.

Other work

Although there continue to be risks from the coronavirus pandemic during the reporting period visits to site have now returned to normal. ONR will continue to monitor the situation and adapt its approach as necessary.

During visits to site the site inspector observes the compliance with of the site with its Covid arrangements. No significant issues or trends have been identified during the visits.

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:

Transformer Fire

On the 19th August 2021 there was a failure in the blue phase of generator transformer 7, resulting in a fire. The fire suppression system activated as designed and promptly extinguished the fire. Reactor 3 automatically tripped, in accordance with the safety case. Post trip cooling was established and the reactor safely shutdown. From a nuclear safety aspect the safety systems operated as designed and there was no risk to workers or the public.

The failure resulted in a significant release of oil on the site, which falls under the vires of the Environment Agency.

ONR will review the outcome of the site 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, to include issuing an Enforcement Notice.

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

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. Since this incident occurred, Morgan Sindall has put in place measures to prevent similar occurrences, and we are satisfied that they have complied with the requirements of the improvement notice.

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](#).

Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Regulation Matters. The online publication (<http://www.onr.org.uk/regulation-matters.htm>) reports on the key themes and developments in each of ONR's regulatory programmes and provides an update about the ongoing changes at ONR. <http://www.onr.org.uk/index.htm>. For the latest news and updates from ONR visit the website and sign up for our ebulletin (<http://www.onr.org.uk/ebulletin/index.htm>).

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