



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

Report for period 1 April to 30 June 2019

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 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 and will respond to any questions raised there. Any person wishing to enquire about matters covered by this report should contact ONR.

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1 INSPECTIONS

1.1 Dates of inspection

1. The ONR nominated site inspector made inspections, supported where appropriate by specialist inspectors, on the following dates during the quarter:
 - 9 - 10 April 2019
 - 14 - 15 May 2019
 - 12 June 2019
2. ONR's civil nuclear security inspector undertook a quarterly inspection at Hunterston B on:
 - 24 - 25 June 2019.

2 ROUTINE MATTERS

2.1 Inspections

3. 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 etc. (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) and the Radiation Emergency Preparedness and Public Information Regulations 2001 (REPPIR).
 - The Fire (Scotland) Act 2005
 - The Nuclear Industries Security Regulations (NISR) 2003
4. 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.
5. In this period, routine inspections of Hunterston B covered the following:
 - Licence condition 8 – Warning notices
 - Security inspection - Backup power and Uninterruptible Power Supply (UPS) arrangements for security systems.
6. On 9 - 10 April 2019 the Site Inspector carried out an unannounced inspection for warning notices on station. The inspection sampled the EDF arrangements for control of safety signs and station fire safety management arrangements. It was confirmed that the combination of site access training and job induction and orientation provided by line managers was sufficient to ensure that individuals were aware of the measures to take in the event of any emergency. There were some areas where warning signs, mainly located outdoors, were not legible and the identification of muster locations was unclear. It was confirmed that these aspects had already been self-identified by EDF and action is underway to address these areas. The inspection was rated as Green, no formal action.
7. On 24 - 25 June 2019, a security inspection was carried out against the requirements of NISR and the approved Nuclear Site Security Plan (NSSP). The purpose of the

inspection was to inspect arrangements surrounding backup power and UPS for security systems. The inspection showed that the site's arrangements are adequate. The inspection was rated as Green, no formal action.

8. On 12 June 2019 North Ayrshire Council held a test of the Off-site Emergency Plan for the station. The overall aim of the test was to validate the adequacy of the off-site emergency arrangements prepared under REPPiR. An ONR assessment team judged that the exercise constituted a test of the off-site plan in accordance with Regulation 10 of REPPiR. A number of improvement opportunities were identified and were fed back to the North Ayrshire Civil Contingencies Team. These included communication challenges and operation of the Strategic and Tactical Co-ordination Groups.
9. 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.
 - During this period no system based inspections were carried out.
10. 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 and across the EDF fleet and usually require a team of four specialist ONR inspectors.
 - During this period a themed inspection on the capability and effectiveness of the EDF Independent Nuclear Assurance (INA) team was carried out. ONR inspected the INA site based team at HNB and found evidence to demonstrate that the team has the capability and effectiveness to provide appropriate advice and influence over station activities. The INA staff were judged to be competent, having appropriate experience and influencing skills, and station management and staff respect the input of the INA team. Some areas for INA improvement have been identified. These findings will be aggregated with the findings from the ONR inspections of INA at other EDF sites, including the corporate centre at Barnwood, to provide an overall view of the capability and effectiveness of the INA internal regulator function within EDF. There were no findings that could significantly undermine nuclear safety and therefore a rating of Green, no formal action, was assigned to the inspection.

3 NON-ROUTINE MATTERS

11. 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.
12. 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 reported to ONR during the period included:

- During CO₂ filling operations on Reactor 3 post outage, a gas circulator low level alarm was received on the lubrication oil tank which caused the gas circulators to trip. This caused a loss of forced cooling to the reactor. The remaining available gas circulators were started up and the tripped gas circulators were returned to service following top up of the oil tank level. Reactor 3 has been shut down for a considerable time and the brief loss of gas circulation did not challenge Reactor 3 cooling requirements. The oil leakage did not result in a spillage of lubricating oil as the oil drains to a dedicated drainage vessel. An investigation has been instigated and the site inspector will follow this up when the report becomes available.
- During a routine test of a nitrogen pump, the pump failed its cool down sequence due to a valve configuration issue. The valve configuration issue led to one of the 3 pump 'trains' on the nitrogen system to be declared unavailable. The nitrogen system provides a common secondary shutdown capability when the reactors are operating. The reactors are shutdown with all control rods inserted, thus the significance of the event was minor as the 2 other nitrogen pump 'trains' were available and therefore operating rule requirements continued to be met. An investigation has been instigated and the site inspector will follow this up when the report becomes available.
- Smoke was noted to be emitting from an electrical panel in the Irradiated Fuel Disposal cell control room. The event occurred due to an electrical coil that had burnt out within a control panel. The panel was isolated and there was no further risk of smoke / fire. A site fire muster was carried out and the Fire Service attended. There were no nuclear safety consequences from this event. There was no fuel in the IFD cell and as the coil operates the fuel grab opening mechanism, its failure would not have resulted in dropped fuel had fuel been present. Station has instigated an investigation which will be followed up by specialist Fire and C&I inspectors when the report becomes available.

4 REGULATORY ACTIVITY

13. 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.
14. No Enforcement Notices (Improvement or Prohibition notices) were issued during the period.
15. No Enforcement Letters were issued during the period.
16. In March 2018, Hunterston B Reactor 3 was shutdown in order to carry out planned inspections of the graphite core. Since then EDF has carried out its statutory outage on Reactor 3 and it has remained shut down whilst the licensee submits a graphite safety case that seeks to justify the return to service of the reactor. The safety case was submitted to ONR on the 17 June 2019 and it will be fully assessed by ONR specialist inspectors. ONR permission to return Reactor 3 to service will require a Licence Condition 30 Consent, post the statutory outage, as well as separate permission for graphite safety case.
17. Hunterston B Reactor 4 was shut down in October 2018 for a planned inspection of the graphite core. The revised safety case for a return to service of Reactor 4 was received by ONR in March 2019. This safety case continues to be subject to robust assessment by ONR's specialist inspectors and a decision will be made on whether it

is safe for Reactor 4 to return to service for the justified period of operation. ONR permission will only be granted for the reactor to return to service if we are satisfied that it is safe to do so. ONR will publish the assessment of the Reactor 4 safety case on the ONR website when available.

5 NEWS FROM ONR

Enforcement Action

18. A summary of enforcement action is provided below. Further detail is available on [our website](#).
- On 2 April Sellafield Ltd were fined £380,000 following ONR's prosecution for safety breaches relating to equipment used for the processing of plutonium.
 - ONR notified Devonport Royal Dockyard (DRDL) of its intention to prosecute following an incident involving a crane that occurred in September 2018. Proceedings are scheduled to commence at Plymouth Magistrates' Court on 23 July 2019.
 - Improvement notice issued to Sellafield Ltd in April 2019 following an incident in the waste vitrification plant in February 2019 where a container was not welded shut.

Regulatory Updates

19. In April we announced the appointment of two NGOs to the Chief Nuclear Inspector's Independent Advisory Panel (IAP) to increase diversity of views and strengthen our openness and transparency. We introduced the Chief Nuclear Inspector's IAP in 2016 to provide us with independent advice on nuclear matters.

Stakeholder Engagement

20. In May we published our strategic framework for international engagement, setting out the priority objectives and criteria for international engagement up to 2025. The framework is available on our [website](#).
21. We launched two public consultations in April and June, both relating to the Euratom Basic Safety Standards Directive 2013. The first is a HSE consultation being managed by ONR on a new [Approved Code of Practice](#) that will assist duty holder compliance with the new Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR). The consultation closed on 5 June but was extended for local authorities until 27 June as some of the consultation took place during the pre-election period for Local Government. A final version of the ACOP will be published in autumn 2019. The second is on [updated guidance](#) to support the amendments to the Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations (CDG). This remains open until 19 July 2019. A final version of the guidance will be published in late summer 2019.
22. On 15 and 16 May we hosted the 23rd meeting of the Heads of European Radiological protection Competent Authorities (HERCA) in Liverpool. The meeting brought together the heads of radiological protection competent authorities from 22 European countries and involved over 50 experts from across Europe. HERCA is a voluntary association where the members work together to identify common issues and propose practical solutions to ensure the highest levels of radiation protection in Europe.

23. On 23 May our Chief Nuclear Inspector, Mark Foy led a [webinar](#), focusing on the work we do to regulate the industry in how it manages the risks arising from external hazards. Over 25 external stakeholders including NGOs joined the webinar.
24. We held our annual [Industry Conference](#) on 5 June 2019 focusing on the theme of ‘Open for Innovation’. More than 100 senior representatives from industry, government, other regulators, academics and research bodies attended with speakers including Joanna Whittington, Director General, Energy and Security at BEIS and Rumina Velshi, President of the Canadian Nuclear Safety Commission.

Corporate News

25. Mark McAllister joined ONR on 1 April, succeeding Nick Baldwin CBE as our new Chair. As Chair Mark will be responsible for ensuring that we deliver our mission to provide efficient and effective regulation of the nuclear industry on behalf of the public.
26. In April, we published our [Corporate Plan for 2019/20](#), setting out our priorities and objectives for 2019/20. Maintaining the delivery of core regulatory functions and holding industry to account on behalf of the public remain at the heart of everything we do.
27. We have been praised by the Nuclear Skills Strategy Group (NSSG), a government organisation, for ensuring we have the right capability and capacity to meet our regulatory demands. They removed the regulatory capacity risk placed on us in 2016 as recognition of our on-going commitment to developing our staff and expanding our recruitment pipelines.
28. We published our [Annual Report and Accounts](#) on 20 June highlighting our performance and key achievements in 2018/2019. We have continued to deliver our prime purpose of public safety, ensuring that duty holders met the required standards of safety and security that society expects. We completed more than 750 inspections across 37 licensed sites, granting permission for 30 nuclear-related activities, serving nine improvement notices and instigating four prosecutions.

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Published 07/19

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