



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

Report for period 1 April to 30 June 2018

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:
 - 23 - 26 April 2018
 - 15 – 16 May 2018
 - 22 – 23 May 2018
 - 31 May 2018
 - 7 June 2018
 - 12 – 14 June 2018
 - 25 June 2018
2. ONR’s civil nuclear security inspectors, supported where appropriate by specialist inspectors, undertake quarterly inspections at Hunterston B. The security inspections carried out during this quarter were undertaken on:
 - 15 – 16 May 2018
 - 13 – 14 June 2018

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) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).
 - 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 6 – Documents, records, authorities and certificates
 - Licence condition 16 – Site plans, designs and specifications
 - Licence condition 22 - Modification or experiment on existing plant
 - The Nuclear Industries Security Regulations (NISR) 2003
 - Fire safety
6. In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate. However, where improvements were considered necessary, the licensee made satisfactory commitments to address the issues, and the site inspector will monitor progress during future visits. Where

necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

7. Licence condition 6 – On the 22 May the Site Inspector carried out an unannounced inspection against the requirements for documents, records, authorities and certificates. The inspection found that there is a good knowledge of the required procedures and evidence was provided to demonstrate that procedures are followed. Whilst the inspection found that there is a need to review the site record retention schedule to ensure that it identifies all records required to be retained under the site licence, there were no findings that could significantly undermine nuclear safety. A rating of Green (no formal action) was assigned.
8. Licence condition 16 - On the 25 April the Site Inspector carried out an inspection against the requirements for site plans, designs and specifications. The inspection identified that whilst revisions are being made to the site plan, there is a lack of clarity on the responsibility for providing oversight of these changes and for providing revised versions of the plan to the ONR. A recommendation was made to address this matter, which will be tracked through to completion by ONR. There were no findings that could significantly undermine nuclear safety and a rating of Green (no formal action) was assigned.
9. Licence condition 22 - On the 24 and 26 April the Site Inspector carried out an inspection against the requirements for modifications or experiments on existing plant. The inspector judged that the governance and management oversight applied to modifications to plant were meeting relevant good practice. Modifications to fuel route plant and the application of the urgent and temporary modifications procedure were also being carried out correctly. The inspection did identify that the quality of self-audits applied to plant modifications should be improved. ONR will monitor the close out of this issue through normal regulatory business. There were no findings that could significantly undermine nuclear safety and a rating of Green (no formal action) was assigned.
10. The Nuclear Industries Security Regulations (NISR) 2003 - On the 13 June the site demonstrated its security contingency arrangements to ONR. Specialist ONR Security Inspectors judged that the site produced a strong performance in all aspects of the response to a security initiated scenario. Whilst some learning points and recommendations were made a rating of Green (no formal action) was assigned.
11. In addition to our routine compliance inspections based on the conditions attached to the nuclear site licence, 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 thirty 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 (six 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.
 - A system based inspection (SBI) on the Data Processing System (DPS) and Automatic Control System (ACS) was carried out on the 15 and 16 May by two specialist control and instrumentation (C&I) and human factors inspectors. A number of areas of good practice were identified that included the proactive use of the simulator to verify new or amended operating instructions and operator interface equipment before being installed on plant. Some areas for improvement were identified including a need for maintenance and test instructions to fully test the safety functions of the DPS and ACS and for living safety documents to unambiguously identify the safety functions required of those systems. Recommendations have been made to address these matters which will be tracked through to completion by ONR. Overall, the inspectors

judged that the DPS and ACS were being maintained and operated in accordance with the safety case and a rating of Green (no formal action) was assigned.

- A security inspection of the DPS was carried out by an ONR specialist security inspector as part of a multi-disciplinary ONR SBI team. The security inspection identified that the operation of the DPS did not meet the requirements of the security case. The site was actioned to take the appropriate corrective action and ONR will monitor progress through to completion of the action. Accordingly, the ONR specialist security inspector assigned a rating of Amber (below standard) for the DPS system.
12. 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 require a team of four specialist ONR inspectors. Inspection topics have included Engineering governance, Control and Supervision and Organisational learning. During this period no themed inspections were carried out.

3 NON-ROUTINE MATTERS

13. 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.

14. 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 the ONR under the site's licence condition 7 arrangements. The site and specialist inspectors sampled the station's follow up reports and corrective actions. From the evidence sampled, the inspector was satisfied that the reported incidents had been adequately investigated and appropriate event recovery actions identified. Matters and events of particular note during the reporting period were:

- Two workers were using a scissor lift to inspect a crane. One of the workers became trapped against the crane support beam causing a lost time injury (LTI). The event has been investigated by the EDF Industrial Safety Team, which has confirmed that all of the mobile elevating work platforms (MEWP) on site conform with Provision and Use of Work Equipment Regulations 1998 (PUWER) and The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) and are in line with the Code of Practice for the safe use of MEWPs. Investigations are ongoing to determine the cause of the event.
- A technician was working in a waste transfer area when he slipped on liquid on the floor and struck his elbow, resulting in a fracture to his arm. A specialist ONR Conventional Health and Safety inspector has reviewed this event and the above MEWP event and determined that they do not meet ONR's formal investigation criteria.
- During shutdown of Reactor 3 for the planned graphite core inspection, a leak was discovered in a weld on the Decay Heat System (DHS). The system was isolated and alternative cooling was provided via the emergency boiler feed system. There was no risk to workers or the public from this event. A project team was established to determine the likely fault mechanism, to repair the leak and investigate the condition of other welds on the DHSs for Reactors 3 and 4. The DHS is a high integrity system and the event was rated as a Level 1 (Anomaly) on the International Nuclear and Radiological Event Scale (INES). An ONR specialist structural integrity inspector has assessed the licensee's investigation of this event. He is satisfied that the causes of the weld failure have been established, that the actions to restore the strength of these welds

are appropriate and he is satisfied with the forward monitoring programme being applied to these welds.

15. The Annual Review of Safety and Security (AROS) was held on the 14 June 2018. The AROS meeting was an opportunity for the station and ONR to reflect on its performance. Whilst station has continued to deliver a strong safety and security performance over the year, the number of recent lost time injuries and the occurrence of two International Nuclear and Radiological Event Scale (INES) Level 1 events have shown that continued focus on safety and security is required.

4 REGULATORY ACTIVITY

16. 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.
17. No Enforcement Notices (Improvement or Prohibition notices) were issued during the period.
18. Reactor 3 was successfully and safely shutdown on 9 March 2018 for its planned inspection of the graphite bricks that make up the core. Cracking of the graphite bricks in Advanced Gas-cooled Reactors is expected as the reactors age. However, the number of cracks found during the inspection of Reactor 3 led, on 2 May 2018, to EDF Nuclear Generation Ltd confirming that Reactor 3 will remain shut down whilst further inspections of the core are carried out, and to allow preparation of a robust safety case that justifies a further period of safe operation.
19. ONR has communicated to EDF NGL that Hunterston B Reactor 3 cannot be returned to service until an adequate safety case has been provided demonstrating to our satisfaction that the reactor can continue to be operated safely. Once satisfied ONR will provide formal agreement to the restart of the reactor through the provision of a Licence Instrument.
20. ONR is satisfied that Reactor 3 at Hunterston B remains safely shut down with adequate cooling being provided. ONR is monitoring EDF NGL's on-going activities to prepare the requisite safety case and we will undertake a detailed assessment of the submission once it has been received, which will inform our decision on any future return to service.

5 NEWS FROM ONR

Stakeholder Engagement

21. On 9 May we held our ONR annual Industry Conference, with the theme - 'Public Safety - everyone's responsibility.' Delegates from more than 45 different organisations attended, and we were delighted that Richard Harrington, Parliamentary under Secretary of State, Minister for Business and Industry, was able to join us to deliver a keynote speech. The conference provided us with an opportunity to engage directly with senior representatives from across industry and government on a number of topical and strategic issues affecting the sector.
22. As part of our continued stakeholder engagement work, we welcomed finance professionals from a number of nuclear site licensees and dutyholders to seminars in London and Birmingham in June. Led by our Finance Director, Sarah High, we hosted the seminars to provide the industry with a better understanding of our charging methodology, the principles we apply, and how the charging process works. To

accompany the seminars we have also published a new booklet - [How we charge for Nuclear Regulation](#) - which is available on our website.

23. The next ONR/NGO engagement forum will take place on 11 October in London. This is a forum to discuss strategic, cross-cutting regulatory matters. Site specific matters are normally addressed via Site Stakeholder Groups. We are always keen to engage with a range of stakeholders and groups on nuclear safety and security issues, so if you do represent a nuclear-interest Non-Governmental Organisation, and are not already involved through our forum or via a Site Stakeholder Group, then please get in touch with the ONR Communications team for further details, via contact@onr.gov.uk

Regulatory News

24. A delegation from ONR, led by Chief Nuclear Inspector Mark Foy, supported the UK's contribution to the 6th Joint Convention review meeting in Vienna. Bringing together 78 countries from around the world, the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management is the world's leading international forum for ensuring society and the environment are protected from hazards arising from spent fuel and radioactive waste. Further details can be found on the IAEA website.
25. In August Mark Foy, will host a webinar on the outcome of the UK report to the joint convention. Further details on how to sign up for the webinar will be advertised on our website and social media channels over the coming weeks.
26. We have notified Sellafield Ltd of our intention to prosecute the company for offences under Section 2 (1) of the Health and Safety at Work etc. Act (1974). The charge relates to an incident on 5 February 2017, at a facility which handles special nuclear materials, which resulted in personal contamination to a Sellafield Ltd employee. The decision to prosecute follows an ONR investigation into the incident
27. In May we awarded the contract for delivery of the UK Nuclear Safeguards Information Management and Reporting System (SIMRS) to Axis 12 Ltd. The IT system is necessary for us to establish a domestic safeguards regime after the UK's withdrawal from the Euratom Treaty. The government has now launched the consultation on Nuclear Safeguards Regulation, further details can be found on our website.

Corporate News

28. In May we published a [self-assessment](#) exercise to update on how well our activity currently aligns with the Regulators' Code, which came into effect in April 2014 to provide a framework for how regulators should engage with those they regulate. The full report is available on our website.
29. In June we published our [Annual Report and Accounts](#) highlighting the extent of our regulatory activities. During the 17/18 year over 1,000 inspections were carried out across 36 licensed sites and transport dutyholders, ensuring the required standards of safety and security were met to protect the public and workers. The full report is available on our website.
30. In July we published our second [gender pay report](#). The organisation-wide results show that ONR has a mean gender pay gap of 35.2%, which is wider than last year, although it is broadly similar to the rest of the UK nuclear industry and anticipated given our workforce profile, and that of the industries from which we have historically recruited. ONR is committed to addressing this issue and continues to focus on improving diversity and inclusion.
31. Our Chief Executive, Adrienne Kelbie, has agreed a three-year contract extension, taking her term of employment to January 2022.

32. For the latest news and updates from ONR visit the website and sign up for our newsletter (<http://www.onr.org.uk/ebulletin/index.htm>).

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