



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

Report for period 01 July 2015 to 30 September 2015

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 for the Hunterston 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 inquire 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:

22 – 24 July 2015
11 – 14 August 2015
01 – 04 September 2015
14 – 17 September 2015
22 – 24 September 2015

2. ONR's civil nuclear security [CNS] inspectors undertake quarterly inspections at Hunterston B. The quarter 3 planned inspection was undertaken on:

11 – 13 August 2015

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 1999 (IRR99) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).
4. The inspections entail monitoring 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:
 - training
 - operating instructions
 - emergency arrangements
 - incidents on the site
 - ionising radiations regulations
 - accumulation of radioactive waste
 - control and supervision of operations
 - examination, inspection, maintenance and testing
 - leakage and escape of radioactive material and radioactive waste
6. In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. 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. In addition to our compliance inspections based on the conditions attached to the nuclear site licence, ONR inspectors are now inspecting the operating reactors based on 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 will be 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 assurances of the site's safe operation and how the safety case is being implemented.
8. During this quarter, ONR undertook inspections against one such system at Hunterston B:
 - Inspection of the station's heating and ventilation systems. Inspectors judged that the requirements of the safety case were not fully met by these systems. This judgement was made in light of shortfalls in the maintenance of safety mechanisms that ensure sustained emergency central control room ventilation. ONR has written to the station to request a schedule of modifications by which to address these shortfalls. ONR is nonetheless satisfied that the shortfalls do not prejudice ongoing safe operation since alternative facilities would be available should the need arise.

3 NON-ROUTINE MATTERS

9. 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.
10. Reactor 3 was successfully and safely shutdown on 2 October 2015 for its three-yearly periodic shutdown, as required under Licence Condition 30. The report for quarter 4 will present more comprehensive information on ONR's regulatory activities during the shutdown and details of its considerations for consent to return to service.
11. ONR was made aware in October 2015 by EDF Energy that a type of age related cracking, known as a 'key-way' root crack, had been discovered in three bricks of the graphite core of Reactor 3 at Hunterston B. The 'key-way' root cracks were discovered by EDF Energy as part of the routine inspections that are undertaken during three-yearly periodic shutdowns of the reactor. This type of cracking is an anticipated phenomenon that has been predicted by detailed analysis and substantial testing carried out by the licensee; however, it was estimated to occur later in the generating lifetimes of the two Hunterston reactors.
12. Although this type of crack was discovered in two bricks in the core of Reactor 4 in 2014 in that instance the affected bricks were part of a small population known to have experienced higher shrinkage than the majority of the graphite bricks in the core.
13. ONR is satisfied that there is no reason to doubt the overall integrity of the affected reactor core.
14. ONR inspectors are continuing to monitor the output of the licensee's ongoing core inspection programme for Reactor 3 and restart of the reactor will only be permitted when ONR is satisfied that it can continue to operate safely.

4 REGULATORY ACTIVITY

15. 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.
16. ONR issued a Licence Instrument on 11 September 2015, giving approval to an amendment to nuclear safety requirement 6 under Licence Condition 23(5). The amendments will provide the station with more flexibility to undertake maintenance on emergency generation equipment than was previously possible.
17. No Enforcement Notices were issued during the period.

5 NEWS FROM ONR

Retirement of the Chief Nuclear Inspector

Dr Andy Hall, the first Chief Nuclear Inspector to hold this statutory office, announced his decision to retire from ONR in November 2015 and until his retirement he is taking a period of compassionate leave for personal reasons. The ONR Board, with the approval of the Secretary of State, has appointed Dr Richard Savage as Acting Chief Nuclear Inspector, pending a process to fill the role on a permanent basis. Richard was previously Head of the Ministry of Defence Nuclear Safety Regulator before joining ONR in his current role as a Deputy Chief Nuclear Inspector.

Regulation Matters magazine

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

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