



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

Report for period 01 July 2014 to 30 September 2014

## 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/lrc/>).

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.

## TABLE OF CONTENTS

1	INSPECTIONS .....	3
2	ROUTINE MATTERS .....	3
3	NON-ROUTINE MATTERS .....	4
4	REGULATORY ACTIVITY .....	5
5	NEWS FROM ONR .....	5
6	CONTACTS .....	6

## 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 2014

12 – 15 August 2014

19 – 22 August 2014

28 August 2014

2 – 05 September 2014

9 – 11 September 2014

15 – 19 September 2014

2. ONR's civil nuclear security [CNS] inspectors undertake quarterly inspections at Hunterston B. ONR CNS conducts one no - notice intervention during the financial year; this intervention has not yet taken place. The quarter 3 planned inspection was undertaken on:

27 – 28 August 2014

## 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 [although the Energy Act acquired Royal Assent in December 2013, inspectors did not commence regulation under that Act until 01 April 2014.
- The Health and Safety at Work Act 1974 (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 (site/station) covered the following:

- Training;
- operating rules;
- periodic shutdown;
- control and supervision;
- operating instructions;
- incidents on the site;
- accumulation of radioactive waste;

- safety mechanisms, devices and circuits;
  - examination, inspection, maintenance and testing.
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 a Systems Inspection of the carbon dioxide storage system. Inspectors judged that this system met the requirements of the safety case, and compliance with associated Licence Conditions was judged adequate.
  9. A team of ONR nuclear safety inspectors undertook inspections during the Reactor 4 statutory outage. Those inspections examined planned modifications and routine maintenance activities, to obtain assurance as to the safe return to service of Reactor 4. Hunterston B formally requested permission for Consent to return Reactor 4 to service on 19 September 2014. The ONR nominated site inspector considered the licensee's application and delivered a Consent for return to service on 29 September 2014, signed by a Deputy Chief Inspector.

## 2.2 Other work

10. Hunterston B undertook an annual review of emergency arrangements during which emergency exercise scenarios for 2015 were discussed. The nominated site inspector and security inspector inspected wider progress against Licence Condition 11 (Emergency Arrangements) and judged the station to have a strong commitment to further investment in equipment.
11. The nominated inspector attended the joint Hunterston A and Hunterston B Site Stakeholder Group meeting held in Ardrossan on 4 September 2014.

## 3 NON-ROUTINE MATTERS

12. 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.

13. During the Reactor 4 statutory outage, Hunterston B reported to ONR the discovery of a new type of axial crack in two bricks of the graphite core, known as a 'keyway root crack'. This mechanism has been predicted to occur by EDF Energy Nuclear Generation Ltd [NGL] towards the end of operational life, and this discovery is the first of its kind in the AGR fleet. The discovery was limited to these two bricks within a known small population of bricks, which EDF had predicted would experience this mechanism before the main population of bricks. ONR specialist inspectors were satisfied that the number of affected bricks lies well within the limits specified within EDF Energy NGL's safety case and that there remains extensive margin of safety against core distortion.
14. ONR was made aware of a trip to two gas circulators in Reactor 4 that occurred on 2 September 2014. The nominated site inspector undertook preliminary investigations and was satisfied that there was significant redundancy in capability to sustain decay heat cooling. The nominated site inspector reviewed the subsequent investigation undertaken by the station and judged this to be comprehensive and prompt in its undertaking. ONR will continue to monitor the station's implementation of improvements identified by the investigation.
15. ONR was made aware on 9 October 2014 of the station's decision to shut-down Reactor 4 and undertake a forced outage to replace a turbine generator rotor. The nominated site inspector was content the reactor had been shut-down safely, and that the decision was a prudent one.

#### **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. ONR issued on 29 September 2014 Licence Instrument No.543, giving Consent to return Reactor 4 to service. This Approval came into effect on 29 September 2014.
18. On 1 September 2014, ONR issued a letter to Hunterston B seeking assurance that measures were being taken to ensure the new diverse hold-down system would be put into service as soon as reasonably practicable. The station subsequently provided satisfactory assurances.
19. No Enforcement Notices were issued during the period.

#### **5 NEWS FROM ONR**

20. Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Quarterly News. The online publication (<http://www.onr.org.uk/onr-quarterly-report.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>).

## 6 CONTACTS

Office for Nuclear Regulation  
Redgrave Court  
Merton Road  
Bootle  
Merseyside  
L20 7HS

website: [www.onr.org.uk](http://www.onr.org.uk)

email: [ONREnquiries@onr.gsi.gov.uk](mailto:ONREnquiries@onr.gsi.gov.uk)

This document is issued by the Office for Nuclear Regulation (ONR). For further information about ONR, or to report inconsistencies or inaccuracies in this publication please visit <http://www.onr.org.uk/feedback.htm>.

© Office for Nuclear Regulation, 2014

If you wish to reuse this information visit <http://www.hse.gov.uk/copyright> [www.onr.org.uk/copyright](http://www.onr.org.uk/copyright) for details.

Published 10/14

*For published documents, the electronic copy on the ONR website remains the most current publicly available version and copying or printing renders this document uncontrolled.*