



Office for Nuclear Regulation (ONR) Quarterly Site Report for Heysham Power Stations

Report for period 01 April 2016 – 30 June 2016

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 Local Community Liaison Committee and are also available on the ONR website (<http://www.onr.org.uk/lc/>).

Site inspectors from ONR usually attend Heysham 1 and 2 Local Community Liaison Committee 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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INSPECTIONS

Dates of inspection

1. The ONR site inspectors made inspections on the following dates during the quarter:

Heysham 1

- 12-14 April 2016
- 3,12, 17-20 May 2016
- 28-30 June 2016

Heysham 2

- 12-13 April 2016
- 28-29 June 2016

2. In addition technical specialists were involved in inspections on the following dates during the quarter:

Heysham 1

- 12 April 2016
- 17-18 May 2016

Heysham 2

- 17-19 May 2016

ROUTINE MATTERS

Inspections

3. Inspections are undertaken as part of the process for monitoring compliance with the following:
 - conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
 - Energy Act 2013;
 - 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, the following routine licence condition compliance inspections were undertaken:
 - Licence condition 5: Consignment of nuclear material
 - Licence condition 7: Incidents on the site
 - Licence condition 10: Training
 - Licence condition 12: Duly authorised and other suitably qualified and experienced persons

Licence condition 14: Safety documentation
Licence condition 17: Management systems
Licence condition 25: Operational records
Licence condition 26: Control and supervision of operations
Licence condition 28: Examination, inspection, testing and maintenance

6. In addition to the program of site licence compliance inspections, ONR also inspects operating reactors based on safety related systems. Each site has a safety case, which identifies the important aspects of operation and management required for maintaining safety.
7. For both sites at Heysham, the key systems important to nuclear safety will be inspected against the requirements of the safety case. We plan to inspect all the safety significant systems over a five-year period. ONR considers that this will provide additional assurance that operations on the Heysham site are safe. Each of these system inspections considers the relevant licence conditions below:

Licence condition 10: Training
Licence condition 23: Operating rules
Licence condition 24: Operating instructions
Licence condition 27: Safety mechanisms
Licence condition 28: Examination, inspection, maintenance and testing
Licence condition 34: Leakage and escape of radioactive material and radioactive waste

8. During the reporting period, the following safety related systems were inspected:

Heysham 1

- Liquid Radwaste

Heysham 2

- Auxiliary Cooling (including pressure vessel cooling system)

9. In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. In addition the safety related systems inspected were considered to meet the requirements of the safety case.
10. 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.

Heysham 1

Reactor 1 Operation with 7 out of 8 Boilers

11. As reported in previous quarterly reports, following the discovery of a defect in one of the eight boiler spines on Heysham 1 reactor 1, the licensee, EDF Energy Nuclear Generation Ltd (NGL) has been looking at a number of possible options to return Heysham 1 reactor 1 back to its original operating design with eight boiler pods available in four quadrants. The option pursued by NGL was operation of reactor 1 with seven out of eight boilers available and the defective boiler isolated.
12. During this reporting period ONR has assessed the safety case for seven pod operation of reactor 1 and was satisfied that the safety case justified this mode of

operation. Consequently ONR issued an agreement under Licence Instrument (LI) 599 to the activities justified by the safety case.

Heysham 2

13. As discussed in the previous ONR quarterly report, an observation during the Torness statutory outage of reactor 2 identified a number of cracks within the outer peripheral graphite blocks of the reactor core were observed as part of the routine inspection activities.
14. To understand the root cause of the peripheral cracking, NGL has initiated a series of test programmes on some unused, peripheral shielding bricks to determine possible damage mechanisms.
15. In June an update meeting between NGL and ONR was held to update ONR of the test programme results on the peripheral shielding bricks, and to discuss how the Heysham 2 inspection findings could trigger the interim inspection for all four reactors at Heysham 2/Torness. ONR's next engagement with NGL meeting is planned for September 2016.

NON ROUTINE MATTERS

16. 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.

REGULATORY ACTIVITY

17. ONR inspectors 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.
18. The following LIs and Enforcement Notices have been issued during the period:

Table 1
Licence Instruments and Enforcement Notices Issued by ONR during this period

Date	Type	Ref No	Description
4 May 2016	Agreement	LI 599	Agreement of Heysham 1 Reactor 1 Safety Case for 7 Pod Operations.
28 April 2016	Approval	LI 605	Approval of Amendment to Heysham 1 Operating Rules
29 April 2016	Approval	LI 606	Approval of Condition 23(4) of Schedule 2 and WITHDRAWAL of Approval pursuant to condition 1(3)(a) (Approval of Operating Rules now withdrawn by LI 606)
23 May 2016	Specification	LI 607	Specification for Heysham 1 to submit changes to Operating Rules
25 July 2016	Approval	LI 608	Approval of Heysham 1 Operating Rules and Withdrawal of Previous Operating Rules Approval

19. Reports detailing ONR regulatory decisions can be found on the ONR website at www.onr.org.uk/pars/

20. ONR issued LI numbers 608 on 25 July 2016, and 606 on 27 April 2016 under Licence Condition 23(4), granting approval to implement a new single operating rule relating to conditions and limits of operation necessary in the interests of safety. All previously approved operating rules were withdrawn as part of this approval. The revised approach will still require the licensee to seek ONR's agreement to any significant changes whilst allowing any minor changes, typically of an administrative nature, to be undertaken by NGL.

NEWS FROM ONR

Chief Nuclear Inspector's Annual Statement

21. ONR published its Annual Report and Accounts 2015/16 on 07 July. As well as reporting on ONR's performance, the report includes the Chief Nuclear Inspector's annual statement, which provides a judgement on the regulatory attention necessary for each licensed site, dependent on the level of hazard and risk posted by the facility. The Annual Report and Accounts can be viewed on the ONR website.

New Regulatory Structure

22. ONR has recently reviewed its organisational arrangements to ensure that our regulatory structure is appropriately focused to deliver front-line regulation over the next few years. To maintain effective and proportionate regulation, and to address potential and actual imbalances in the current workloads of the programmes, we have created three nuclear safety programmes, each led by a Deputy Chief Inspector. These programmes are:
- A new reactors programme dealing with design assessment, licensing and construction of civil reactors.
 - An operating facilities programme dealing with operating reactors, defence sites and other operating facilities.
 - A Sellafield, decommissioning, fuel and waste programme dealing predominantly in decommissioning and waste.

You can view ONR's [organisational structure](#) and full [regulatory structure](#) on our website.

Chief Nuclear Inspector Summary Plan For 2016/17

The CNI Summary Plan outlines high level regulatory milestones to deliver ONR's Strategic Plan to 2020 and ONR's approach to the delivery of safety and security regulation across the UK's nuclear reactors and facilities. It was published on 11 July and is available on the ONR website.

Regulation Matters magazine

23. 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/regulation-matters.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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