

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

Report for period 04 January 2017 – 31 March 2017

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 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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1 INSPECTIONS

1.1 Dates of inspection

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

Heysham 1

- 17-19, 31 January 2017
- 1-3, 9 February 2017
- 8, 21-23 March 2017

Heysham 2

- 17-18 January 2017
- 14-16 February 2017
- 21-22 March 2017

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

Heysham 1

- 25-26 January 2017
- 8-9, 21-22 February 2017
- 14, 21-22 March 2017

Heysham 2

- 14-16 February 2017
- 21-22 March 2017

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 (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 inspections of (Heysham 1 and 2) covered the following:

- Licence condition 7: Incidents on the site
- Licence condition 11: Emergency arrangements
- Licence condition 14: Safety documentation

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 stations 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

- Reactor post trip systems

Heysham 2

- Instrument Air and Turbine overspeed protection
- Decay store

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.

2.2 Other work

11. On 18 January 2017, a team of ONR inspectors observed a combined demonstration of the Heysham 1 and Heysham 2 onsite emergency response arrangements during exercise “kingfisher”. The exercise was a suitably challenging scenario that provided a suitable demonstration of both stations’ emergency arrangements. As with all emergency demonstration exercises a number of opportunities for improvement were identified, which have been communicated to each of the stations. In the case of Heysham 2, the ONR nominated site inspector is to be advised of future shift exercises intended to test the implementation of the opportunities for improvement identified by those involved in the exercise.

12. The Counter Terrorist Exercise (now called a Security Contingency Exercise under the Security Assessment Principles (SyAPs)) held at Heysham was judged an adequate demonstration.
13. The periodic shutdown of nuclear reactors operated by EDF-NGL is a requirement of Licence Condition 30. At Heysham 1, statutory outages are undertaken at three year intervals in accordance with the approved maintenance schedule preface. On the 6th February 2017, Heysham 1 reactor 1 was shut down for its statutory outage.
14. During the statutory outage a number of ONR specialist inspectors carried out a series of inspections to inform ONR's decision on whether to grant consent for reactor 1 to re-start following the statutory outage. On the 8th March 2017 the ONR superintending inspector for the operating reactors' programme, accompanied by the Heysham 1 nominated site inspector and outage project inspector, attended a meeting with the station to discuss the progress with the statutory outage of the Heysham 1 Reactor Unit 1. ONR raised one start-up issue which focused upon the discovery of debris in boiler super-heater tail pipes which NGL addressed through separate safety justification supporting start-up of Unit 1. ONR assessed this case and was of the opinion NGL had provided a sufficient safety argument addressing safety concerns relating to reactor 1 start-up and its safe operation until its next periodic shutdown.
15. NGL confirmed that all Maintenance Schedule requirements for reactor 1 periodic shutdown and identified modification work for the outage had been completed. Appointed examiner's findings confirmed that Unit 1 concrete pre-stressed pressure vessel and its penetrations were compliant with design code requirements. Inspection against Pressure Safety System Regulations identified no significant defects and NGL's own independent assurance group supported Unit 1 start-up.
16. Based upon evidence gathered from both ONR's own inspections and presented by NGL, the ONR outage project inspector recommended that ONR issue Licence Instrument 612 against LC30(3) under Nuclear Site Licence 60 giving ONR's consent to start-up Heysham 1 Reactor Unit 1 following its 2017 periodic shutdown. This request was implemented on Friday 7 April 2017.

3 NON-ROUTINE MATTERS

17. 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.

4 REGULATORY ACTIVITY

18. 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.

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

Date	Type	Ref No	Description
April 2017	Consent	LI612	Consent for re-start of Heysham 1 Power Station Reactor 1 following the 2017 Periodic Shutdown

Reports detailing the above regulatory decisions can be found on the ONR website at <http://www.onr.org.uk/pars/>.

5 NEWS FROM ONR

New reactors update:

- ONR received a request from Government to begin the Generic Design Assessment process for the UK HPR1000 in January. The reactor is now in Step 1 of the GDA process.
- On 30 March, ONR issued Design Acceptance Confirmation for the AP1000 nuclear reactor, designed by Westinghouse. The regulators required 51 GDA issues to be resolved before confirming suitability of the design.
- ONR granted its first consent for the start of construction at Hinkley Point C licensed site. The consent covers the placement of the structural concrete for the first nuclear safety-related structure at the site.
- On 31 March, Horizon Nuclear Power submitted its application for a nuclear site licence to build and operate two UK Advanced Boiling Water Reactors at Wylfa Newydd on Anglesey.

Quarterly statement of civil incidents

19. ONR published its quarterly statement of civil incidents reporting on the period October-December 2016. There was one incident which met ministerial reportable criteria at Dounreay involving contamination of workers' clothing. There was no detectable intake of radioactive material by any of the people involved in the incident.
20. Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Regulation Matters. The 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 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>).

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