



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

Report for period 1 July 2018 – 30 September 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 Local Community Liaison Committee and are also available on the ONR website (<http://www.onr.org.uk/lc/>).

Site inspectors from ONR usually attend the Heysham 1 and 2 Local Community Liaison Committee 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 inspectors made inspections on the following dates during the quarter:

Heysham 1

- 2 – 5 July 2018
- 11 – 12 July 2018
- 18 July 2018
- 26 July 2018
- 4 – 6 September 2018
- 25 – 27 September 2018

Heysham 2

- 17 – 19 July 2018
- 14 – 15 August 2018
- 25 – 27 September 2018

2. In addition, other ONR specialist inspectors were involved in interventions on the following dates during the quarter:

Heysham 1

- 2 – 6 July 2018
- 11 – 12 July 2018
- 17 – 19 July 2018

Heysham 2

- 17 – 19 July 2018
- 25 -26 September 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 (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 Regulatory Reform (Fire Safety) Order 2005
 - the Nuclear Industries Security Regulations 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, the following routine inspections were undertaken:

Heysham 1

- Licence condition 11 – Emergency arrangements
 - Licence condition 22 – Modification or experiment on existing plant
 - Licence condition 26 – Control and supervision of operations
 - Licence condition 28 – Examination, inspection, maintenance and testing
6. Licence condition 11 - The Station's arrangements for dealing with any accident or emergency arising on the site were found to align with ONR inspection guidance. The annual review of emergency preparedness provided a comprehensive review of compliance, operational experience and areas for further improvement. An ONR rating of 'green' was awarded with no regulatory issues being raised.
7. Licence condition 22 – The Licensee is judged to have adequate arrangements to control any modification or experiment carried out on any part of the existing plant or processes which may affect safety. The arrangements were found to be in line with ONR guidance and from the sample of evidence seen during the inspection are being complied with at Heysham 1. The inspection was rated as Green for compliance with arrangements with no regulatory issues being raised.
8. Licence condition 26 – The licensee's arrangements for control and supervision of operations were sampled during the Reactor 2 periodic shutdown. This intervention was undertaken as an unannounced inspection in accordance with ONR guidance for intervention planning. The ONR inspector judged that the licensee's arrangements met the expected standards for compliance against LC26. An inspection rating of green rating was assigned.
9. Licence condition 28 – Various maintenance activities were sampled by a number of different ONR specialist Inspectors as part of the periodic shutdown. These activities were being undertaken in accordance with the approved plant maintenance schedule. Based on areas sampled, the ONR inspectors judged that the licensee's arrangements with respect to examination, maintenance and testing met with ONR's regulatory expectations. Inspection ratings of green were given for all of the interventions.

Heysham 2

- Licence condition 7 – Incidents on the site
 - Licence condition 11 – Emergency arrangements
 - Licence condition 14 – Safety documentation
10. Licence condition 11: The Station's arrangements for dealing with any incidents or emergency arising on the site were found to align with ONR inspection guidance. The annual review of emergency preparedness provided a comprehensive review of compliance, operational experience and areas for further improvement. An ONR rating of 'green' was awarded with no regulatory issues being raised.
11. Licence condition 7: This inspection was focused on the licensee's arrangements for recording, screening, reporting and investigating events on site. ONR also sampled investigation reports and held discussions with the licensee staff. Overall, the ONR inspector was content based on the sample inspected that the licensee has implemented adequate arrangements for compliance against LC7 and hence assigned an inspection rating of green. A small number of areas for improvement were fed back to the licensee in relation to incident categorisation process.

12. Licence condition 14 - LC 14 requires the licensee's to produce and implement adequate arrangements for the production and assessment of safety cases consisting of documentation that justifies safety during all phases of site operation. This intervention focused on the licensee's arrangements for safety case management, dealing with safety case anomalies, resources & resilience and the output from the Safety Case Health Review (SCHR) of the Heysham 2 safety case. Based on the sample inspected, the ONR inspector was content that the licensee's arrangements met ONR's expectations and hence assigned an inspection rating of green. A number of areas for improvement were fed back to the licensee in relation to the ownership and timely implementation of the recommendations arising from the SCHR.

System Based Inspections (SBI)

13. 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. For both stations at Heysham, the key systems important to nuclear safety will be inspected against the requirements of the safety case 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

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

Heysham 1

15. No SBI were undertaken during this period, which is usual policy during the periodic shutdown.

Heysham 2

Data Processing and Control System (DPCS)

16. This System Based Inspection (SBI) covered the Data Processing and Control System (DPCS) against its assigned safety function. The function of DPCS is to provide prompts for operator action (i.e. protection) in conjunction with separate hard wired alarms and indications; and to ensure that in normal operation the plant remains within the operating envelope of the reactor. This inspection was undertaken by a small team of ONR inspector covering the Control & Instrumentation (C&I) and Human Factors specialists.
17. The intervention also included a plant walk-down of the system. Key areas visited included;
- Unit 7 Computer Room
 - Central Control Room
 - Control & Instrumentation Maintenance Facility

- Unit 9 Computer Room
 - Common Computer Equipment Room
18. ONR inspectors judged that the overall condition of the areas visited met and in some instances exceeded their expectations.
19. After considering the totality of evidence examined during the inspection against the relevant licence conditions (LCs 10, 23, 24, 27, 28 and 34), the ONR inspectors concluded that overall, the licensee's arrangements, and their implementation, associated with the DPCS system adequately met the requirements of the safety case. However, the inspectors identified a number of areas where there were opportunities for improvement. The inspectors were content that the licensee has raised Condition Reports to address these matters and ONR will follow them up with the station as part of routine regulatory business.

Boiler Feed System

20. This System Based Inspection (SBI) covered the boiler feed system at Heysham 2 licensed nuclear site. The fundamental purpose of the system is to feed the boilers during normal and post trip operating conditions. This inspection focused mainly on the Main Boiler Feed, the Emergency Boiler Feed and the Backup Emergency Feed sub-systems.
21. The intervention also included a detailed plant walk-down of the system. Overall, inspectors were content that plant areas visited were in an acceptable standard. All the relevant systems viewed were connected and available to deliver the required safety duty.
22. After considering the totality of evidence examined during the inspection against the relevant licence conditions (LCs 10, 23, 24, 27, 28 and 34), the ONR inspectors concluded that overall, the licensee's arrangements, and their implementation, associated with the boiler feed system adequately met the requirements of the safety case. However, a number of minor shortfalls associated with the condition of plant areas and equipment was raised with the licensee. In all instances, the licensee has promptly addressed ONR's feedback by raising condition records. ONR will follow up as part of routine regulatory business.

2.2 Other work

Heysham 1

23. Site Licence Condition 30 – Reactor 2 was shut down on 18 June to undertake its Statutory Outage. During this period a number of ONR specialist inspectors undertook assessment and inspection of the outage activities including civil, electrical, mechanical, structural integrity and industrial safety inspections.
24. Consent was granted by ONR under licence condition 30(3) on 14 August 2018 allowing the licensee to start up Reactor 2. ONR's decision to grant consent is supported by a project assessment report which has been published on the ONR [website](#).
25. During this period the current Nominated Site Inspector accompanied the new incoming Nominated Site Inspector as part of the formal site handover process. The incoming Inspector was introduced to a number of Station personnel and given an overview of processes and the plant in line with ONR handover process.

3 NON-ROUTINE MATTERS

26. 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.

Heysham 1

27. During this period Reactor 1 automatically tripped and safely shut-down with all post trip cooling systems functioning. The reactor trip was coincident with planned routine electrical protection testing activities ongoing at the time. ONR was promptly informed of this event by the Licensee, who has undertaken an investigation into the cause of the trip. ONR is satisfied with the Licensees categorisation, initial response and proposed actions to this event.

4 REGULATORY ACTIVITY

28. 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
14 August 18	LI	616	Consent under license condition 30(3) to start-up Heysham 1 Reactor 2 following periodic shutdown.

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

News from ONR – July-September 2018

Stakeholder Engagement

- In August our Chief Nuclear Inspector Mark Foy and Deputy Chief Inspector Mina Golshan, hosted a webinar for stakeholders on the outcomes of the UK report to the Joint Convention. This is a new channel of communication which we have introduced, and further webinars are planned for November and February 2019. If you would like to find out more, please contact the ONR Communications team at contact@onr.gov.uk
- The ONR/NGO engagement forum took 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

- On 25 July we announced our decision to prosecute the Atomic Weapons Establishment for offences under Section 2 (1)* of the Health and Safety at Work etc. Act (1974). This charge related to an electrical incident on 27 June, 2017, which resulted in injury to an AWE employee. The incident was a conventional health and safety matter and there was no radiological risk to workers or the public. At a court hearing on 18 September, AWE pleaded guilty to the charge and sentencing was adjourned until 9 November, 2018.

In a separate case brought by ONR, EDF Energy Nuclear Generation Ltd and Doosan Babcock Ltd pleaded guilty on 10 October, 2018) to offences under the Health & Safety at Work etc. Act 1974, section 3(1) and the Work at Height Regulations 2005, Regulation 4(1) respectively. The charges relate to an incident on 12 April 2017 at the Hinkley Point B nuclear power station, which resulted in a serious injury to a Doosan Babcock Ltd employee. Following a hearing at Taunton Magistrates Court, the case was committed for sentencing at Taunton Crown Court with an initial hearing date set for 16 November 2018, although this date is subject to change.

Both of these cases related to conventional, industrial-type incidents that would have been subject to regulation by the Health and Safety executive prior to ONR's creation four years ago, when we gained responsibility for such matters on licensed sites. There was no radiological risk to workers or the public.

Updates on each case will be published on our website www.onr.org.uk

- We have recently published our [Statement of civil incidents](#) meeting the Ministerial Reportable Criteria (MRC) reported to ONR - Q2 2018 (1 April 2018 to 30 June 2018). Full details are available on our [website](#).

Corporate News

- 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.
- Our Chief Executive, Adrienne Kelbie, has agreed a three-year contract extension, taking her term of employment to January 2022.
- The Department for Work and Pensions has started the process for recruiting a new ONR Chair (further details can be found on the [public appointments website](#)). Our current Chair, Nick Baldwin CBE, will remain in office until 31 March, 2019.

5 CONTACTS

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