



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

Report for period 1 January 2020 – 31 March 2020

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.

TABLE OF CONTENTS

1	INSPECTIONS	3
2	ROUTINE MATTERS.....	3
3	NON-ROUTINE MATTERS.....	7
4	REGULATORY ACTIVITY	7

1 INSPECTIONS

1.1 Dates of inspection

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

Heysham 1

- 9, 13 - 15, 22 - 23, 29 January
- 11 - 12, 19 – 20 February
- 5, 10, 17 March

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

- 13 – 14, 28 – 29 January
- 5, 10 – 12 March

Heysham 2

- 10 – 14 February 2020

In addition, the site inspectors and other ONR specialist inspectors were involved in interventions on the following dates during the quarter as part of the Unit 8 Statutory Outage

- 18 - 20 of February 2020 (Structural Integrity)
- 25 February 2020 (Civil)
- 25 – 26 February 2020 (Supply Chain)
- 26 - 27 February 2020 (Mechanical Engineering and Internal Hazards Inspection)
- 3 - 4 March 2020 (C&I)
- 3 March 2020 (Radiological Protection)

2 ROUTINE MATTERS

2.1 Inspections

2. 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).
3. 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.
4. In this period, the following routine inspections were undertaken:

Heysham 1

Licence Condition 17 - Management Systems

5. Licence Condition 17 requires the licensee to establish and implement management systems which give due priority to safety and within its management systems, make and implement adequate quality management arrangements in respect of all matters which may affect safety. For this intervention we inspected the Quality Assurance (QA) arrangements associated with the supply chain (including goods receipt) and lifetime records.
6. Overall, from the evidence sampled, we judged that the licensee adequately demonstrated compliance with the requirements of LC17 and therefore rated this inspection as Green, no formal action. We noted a small number of low-level QA shortfalls, which the station immediately started to remedy.

Licence Condition 36 - Organisational Capability

7. One requirement of Licence Condition 36 is that the licensee should 'provide and maintain adequate financial and human resources to ensure safe operation of the licensed site'. The intervention sampled a number of recent organisational changes and progress with actions placed during previous LC36 inspections.
8. We concluded that the licensee's arrangements for compliance with LC36 met relevant good practice when compared to ONR's guidance. We noted that the Human Resources team at Heysham 1 is experienced and has a good understanding of what is required under the company's arrangements. However there had been a significant number of management changes at the station and we found that some identified improvement actions had not been fully embedded.
9. We judged the Operations Department has a good understanding of its competence and capability which is reviewed regularly and which informs decisions on shift staffing. We noted that there had been an overall drop in experience levels within the Operations Department but we found evidence of proactive management to bolster and balance experience across the shifts.
10. We also concluded that organisational changes are appropriately categorised, but noted some further improvements were required with regard to the completion of due process before commencing the implementation of some changes.
11. Overall, from the evidence sampled, we judged that the licensee adequately demonstrated compliance with the requirements of LC36 and therefore rated this inspection as Green, no formal action. A regulatory issue was raised however to address the timeliness in completing due process before the implementation of organisational changes.

Heysham 2

Licence Condition 26 - Control & Supervision (Including Out of Hours)

12. This intervention sampled the control of supervision arrangements (LC26) for the outage and included an unannounced out of hours inspection for LC26. Overall the intervention found no significant issues. We spoke to a number of contract personnel from a variety of companies who were performing outage work. All had a reasonable understanding of the station's, 'do your 5 a day,' message consisting of time out for personal safety, procedural use and adherence, pre-job briefs, work area standards and peer to peer coaching. No unsafe practices were seen and the personnel all had a good awareness of their supervisor and knew what you do in an emergency or accident.

Other Outage Related Inspections and Activities

13. Heysham 2 Reactor 8 statutory outage commenced on 31 January 2020. ONR specialist inspectors carried out the inspections detailed in section 1 above and other assessment activities to establish that:
 - requirements set out in the Station’s Plant Maintenance Schedule (PMS) have been complied with;
 - work has been carried out in accordance with arrangements for identified Structures, Systems and Components (SSC) to the required quality by competent persons;
 - safety issues identified during the reactor outage have been adequately addressed with suitable and sufficient justification provided to allow a regulatory judgement to be made that start-up of the reactor is safe.
14. ONR’s inspections of the Heysham 2 Reactor 8 periodic shutdown confirmed that NGL was carrying out EIMT in accordance with the requirements of its Plant Maintenance Schedule and that work was conducted to the required quality standards and by competent personnel. No issues of significance were identified from the inspections or assessments. Further details can be found within the ONR’s project assessment report for the Reactor 8 outage that is / will be published on the ONR website.

System Based Inspections (SBI)

36. 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 (where relevant) 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

Heysham 1

37. During the reporting period, a team of ONR specialist inspectors carried out an SBI of the irradiated fuel route facilities. The inspection included a plant walk down of the additional fuel storage facility, the irradiated fuel dismantling facility, fuel ponds and fuel flask areas. In addition an ONR safeguards inspector accompanied the safety inspectors for familiarisation purposes to gain a greater understanding of the station’s fuel route arrangements from a nuclear material accountancy and control perspective. From the sample inspected, we judged that compliance against LC 10, 23, 24 and 27 satisfied the required standard and a 'Green' rating was given for these licence conditions.
38. However we judged that compliance against LC 28 did not satisfy the required standard and an 'Amber' rating was given for this licence condition. This was judged necessary since a number of key fuel route systems had not been subject

to an equipment reliability review which represented a shortfall against the management of ageing and obsolescence. In addition, a human performance issue was observed during a plant surveillance tour when measurements which fell slightly outside of the specified limits were accepted and not reported to line management.

39. Following application of ONR's enforcement management model, an enforcement letter was issued to Heysham 1 to remedy the compliance shortfalls. ONR noted that it was unlikely that ageing related failures would result in significant or serious consequences, due to there being other mechanisms in place to identify ageing plant and due to the redundancy and diversity implemented in the safety measures.

Heysham 2

40. During the reporting period, no system-based inspections were conducted at Heysham 2.

2.2 Heysham 2;- Periodic Safety Review (PSR)

41. ONR carried out a review of the Heysham 2 and Torness periodic safety review (PSR) during January 2019 to January 2020. ONR concluded that NGL has carried out an adequate periodic safety review and a decision letter was forwarded to the stations at the end of January 2020.
42. ONR's decision letter agreed that NGL's arrangements for PSR have been followed and an adequate review of the station's nuclear safety case and safety management arrangements has been undertaken. The review did not identify any significant nuclear safety threats that would impact on station's operations for the period through to end of generation, currently 2030 for Heysham 2 and Torness stations.
43. ONR's assessments of the Heysham 2 and Torness PSR3 submission were considered thorough and systematic. ONR's assessment findings supported NGL's conclusion that no serious nuclear safety threats existed in continued operation of Heysham 2 and Torness power station. ONR identified seven findings in its assessment work, which NGL will close out within agreed timescales with ONR.

2.3 Other work

Heysham 1

Level 1 and Level 2 Emergency Exercise 'CASSIOPEIA'

44. On 14 January 2020, a team of ONR inspectors observed the Heysham 1 annual level 1 emergency demonstration exercise "CASSIOPEIA". The exercise tested both Heysham 1's on-site (Level 1) emergency response and the off-site (Level 2) multi-agency nuclear emergency response arrangements. Overall ONR judged that exercise "CASSIOPEIA" provided an adequate demonstration of the site's emergency arrangements and demonstration of the local authority multi-agency emergency plan.

3 NON-ROUTINE MATTERS

45. 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. There were no such matters or events of significance at either station during this period

4 REGULATORY ACTIVITY

48. 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.
49. One Licence Instrument was issued during the reporting period, LI number 626, a Specification to submit high-activity sealed source (HASS) returns to ONR. ONR previously issued a Specification requiring the submission of HASS records to ONR for movements of HASS on an annual basis. As part of implementation of the Basic Safety Standards Directive (Council Directive 2013/59/Euratom of 5 December 2013) in the UK, ONR issued a new HASS Specification to reflect changes in the Directive and corresponding UK legislation and these supersede the previous Specification. LI number 626 requires that movements of HASS onto and off the site are notified to ONR without undue delay and in any event within 40 calendar days of the movement. Additionally, confirmation of all HASS holdings on site should be provided every five years, beginning in January 2024.

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

Heysham 1 and 2

Date	Type	Ref No	Description
13/01/20	Specification	LI 626	Specification to submit HASS returns to ONR

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

News from ONR - January to March 2020

Below are summaries of key activities over the last three months. Further detail is available on [our website](#).

Covid-19 (Coronavirus) (ONR position)

ONR is continuing to protect society by securing safe nuclear operations during the Coronavirus pandemic. ONR staff continue to work from home, in line with government advice. We have considered our priorities, have deferred non-critical activities, and are carrying out as much of our work as possible via videoconference, phone and email. Our regulatory focus includes assurance, where appropriate, from site licensees that they are applying the public health measures introduced to reduce the spread of coronavirus. A limited number of our inspectors can, as key workers, continue to travel to site as necessary to conduct urgent and essential regulatory inspections. Nuclear sites have been reducing non-essential activities so as to protect staff, infrastructure, and the public. As always, we are regulating those activities to ensure they are carried out safely and securely. ONR's latest position [can be found on our website](#).

Enforcement Action

- ONR served an [Enforcement Notice](#) on Urenco UK Ltd following a fire safety inspection at its Capenhurst Works in Cheshire during December 2019. The notice was issued in response to shortfalls identified in the fire alarm and detection systems at one of the site's facilities.
- In February ONR announced that [Sellafield Limited had complied](#) with an Improvement Notice relating to staff training, operating procedures and procedural adherence that they were served with in May 2019.

Regulatory Updates

- In January ONR published an update to its [Safety Assessment Principles](#), to incorporate some relatively minor revisions including typographical corrections and updates to reflect changes to the UK's nuclear regulatory framework since 2014.
- In February ONR completed Step 3 of the Generic Design Assessment (GDA) of the UK HPR1000 design, and took the decision to progress to Step 4 of the GDA. During Step 3, ONR increased its regulatory scrutiny and undertook a more detailed assessment of the design, focusing on the methods and approaches used by the GDA Requesting Party to underpin their safety and security claims.
- In March we published the Quarterly [Statement of Civil Incidents](#) for the period 1 October to 31 December 2019. During this reporting period there were two civil incidents at nuclear licensed sites within Great Britain that met the Ministerial Reporting Criteria as defined within the Nuclear Installations (Dangerous Occurrences) Regulations 1965 and ONR guidance in relation to notifying and reporting incidents and events.

Stakeholder Engagement

- On 15 January ONR launched a four-week public consultation on its draft 2025 Strategy. Once agreed, the strategy will set our direction and priorities for the next five years. To support the public consultation we held a webinar for NGOs and other stakeholders in which our Chief Executive, Adrienne Kelbie, and Technical Director, Anthony Hart, gave an overview of the strategy and welcomed questions and comments. The strategy is due to be published in May 2020.
- In January, ONR achieved Level 3 Disability Confident (Leader) status, recognising our desire to put people first and create an environment in which everyone can thrive. The

government-backed scheme encourages employers to think differently about disability and take action to improve how they recruit, retain and develop disabled people.

- In February, we announced the appointment of two **new members to the ONR Board**. **Dr Janet Wilson** took up the appointment on 1 April 2020 and Tracey Matthews will take up her appointment on 1 June 2020 – both appointments are for five year terms.
- In February more than 70 stakeholders involved in the transport of radioactive material attended a conference organised by ONR's Transport Competent Authority (TCA) team. The event provided a good opportunity for the TCA team to share their expectations on compliance with regulations governing the transport of radioactive material.

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