



Office for Nuclear Regulation (ONR) Quarterly Site Report for Hartlepool Power Station

Report for period 1 January – 31 March 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 Hartlepool Local Community Liaison Committee and are also available on the ONR website (<http://www.onr.org.uk/lc/>).

Site inspectors from ONR usually attend Hartlepool 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

The ONR site inspector made inspections on the following dates during the quarter:

- 14 January
- 19 – 22 January
- 8-11 February
- 14-18 March
- 23 March

Other ONR warranted inspectors undertook interventions on the Hartlepool nuclear licenced site on the following dates during the quarter:

- 14 January
- 21 January
- 8-9 February
- 15-16 March

2 ROUTINE MATTERS

2.1 Inspections

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).

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.

In this period, routine inspections at Hartlepool Power Station covered the following:

- Training and competence of staff undertaking roles important to safety
- Control and supervision of operations
- Examination, inspection, maintenance and testing
- Incidents on site
- Organisational Capability
- Operating Instructions

In addition to our program of site licence compliance inspections, ONR also undertakes system based inspections which are focused on the site's critical safety systems and structures and are derived from the licensees' safety cases. During the period, ONR performed system based inspection of the following systems:

- Heating and ventilation systems
- No-break electrical supplies

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.

Details of these inspections can be found in the Hartlepool intervention records located at:

<http://www.onr.org.uk/civil-nuclear-reactors/operating-reactors.htm>.

2.2 Other work

2.2.1 Ageing Management

ONR undertook an intervention to evaluate implementation of the licensee's arrangements for maintenance of systems structures and components providing a nuclear safety function. The main objective for this inspection was to confirm that preventative maintenance regimes are sufficient to detect and rectify physical ageing effects. Overall we concluded that the maintenance and testing regimes, for sampled mechanical, and control and instrumentation components, were consistent with recognised good practice. A potential shortcoming was identified in relation to the specification of regular inspection of pipework for the CO₂ Storage Plant and Low Pressure Back-up Cooling System. Following the inspection, ONR wrote to EDF NGL requesting a programme to address this issue and we have subsequently received a satisfactory commitment from the licensee. The site inspector will monitor EDF NGL's progress during future visits.

2.2.2 Boiler Spine Cooling Modifications

As discussed in previous ONR quarterly reports, in 2014 a cracked region was discovered on a boiler spine at Heysham 1 Reactor 1, which is of a similar type of boiler design to those installed at Hartlepool power station. In 2015, EDF NGL installed modifications at Hartlepool Power station which were designed to reduce the temperature of the boiler spines in the region where cracking was discovered at Heysham 1; thereby effectively reducing the crack growth mechanism during full power operations.

In 2015, during our assessment of the safety justification to support EDF NGL's safety case for return to full power, we identified areas of uncertainty associated with the thermal modelling used to underpin the cooling modification effectiveness. Whilst more assessment work was undertaken, NGL operated the reactors below full power which achieved a controlled 10°C temperature reduction on the relevant boiler spine weld. NGL subsequently submitted additional safety documentation including actual plant data which addressed ONR's previous concerns. ONR issued its agreement (Licence Instrument 555) which enabled NGL to return the reactors to full power.

2.2.3 Amendment of Operating Rules

Hartlepool power station is operated in accordance with limits and conditions of operation (operating rules) that are set down within Technical Specifications. These typically specify the plant configuration and availability requirements, protection settings and parameter values that define a safety envelope beyond which the plant shall not be intentionally operated. A subset of limits and conditions, known as Nuclear Safety Requirements (NSRs) was approved by ONR in accordance with Licence Condition 23.

EDF NGL requested permission from ONR to revise NSR 6 which establishes requirements for the availability of electrical power supplies. ONR's assessment of EDF NGL's submission established that the proposed changes were editorial in nature, reflecting completion of a project at Hartlepool to replace five motor alternator sets (which provide a guaranteed

no-break electrical supply) with five more modern dual inverter sets. ONR issued Licence Instrument 556 approving this amendment.

During the period, EDF NGL submitted a proposal to ONR for the temporary amendment of Technical Specification 8.2.1 which establishes requirements for the availability of the Station's carbon dioxide storage and distribution system. Three seismically qualified Clayton Boilers are installed at Hartlepool Power Station and these are claimed in the nuclear safety case to provide steam supplies to the CO2 vaporisers following a seismic event. EDF NGL's proposed temporary amendment to the Technical Specification was intended to enable installation of new isolation valves between each Clayton Boiler to facilitate maintenance on individual boilers. ONR issued Licence Instrument 557 acknowledging this amendment.

3 NON-ROUTINE MATTERS

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 during the period.

4 REGULATORY ACTIVITY

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.

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
28/1/16	Agreement	LI 555	Agreement To EC356574 – Revised compliance arrangements for boiler spine weld temperatures
25/1/16	Approval	LI 556	Amendment of approved operating rule: Nuclear Safety Requirement 6 (Electrical supplies)
14/3/16	Acknowledgement	LI 557	Acknowledgement of EC357561 - Temporary change to Technical Specification 8.2.1. to allow Clayton boiler maintenance.

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

5 NEWS FROM ONR

5.1 Chief Nuclear Inspector appointment

ONR announced the appointment of Dr Richard Savage as its new Chief Nuclear Inspector (CNI) to lead our regulatory activity. Richard is a Chartered Engineer with an extensive background in nuclear safety and regulation. He served as Head of the Defence Nuclear Safety Regulator, Ministry of Defence, before being appointed to ONR as a Deputy Chief

Nuclear Inspector in 2013. He was Acting CNI since Dr Andy Hall's retirement in November 2015.

5.2 ONR Strategic Plan 2016-2020

In March, ONR published its Strategic Plan covering 2016-2020. The plan sets out the factors that will influence our work and the assumptions we have made about regulating the nuclear sector in the next few years, as well as how we deliver the commitments we have made to the public, ministers and government, licensees, dutyholders and our staff. The plan was laid in Parliament on 22 March and can be viewed on the ONR website.

5.3 Regulation Matters magazine

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>.

6 CONTACTS

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