



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

1 October 2017 – 31 December 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 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 where these reports are presented and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should contact ONR.

TABLE OF CONTENTS

1	INSPECTIONS	3
2	ROUTINE MATTERS	3
3	NON-ROUTINE MATTERS	5
4	REGULATORY ACTIVITY	6
5	NEWS FROM ONR	6
6	CONTACTS	7

1 INSPECTIONS

1.1 Dates of inspection

ONR inspectors undertook interventions at Hartlepool Power Station on the following dates during the reporting period:

- 25 – 29 September 2017
- 9 -12 October 2017
- 31 October – 1 November 2017
- 13 – 17 November 2017
- 5 - 6 December 2017
- 11 – 15 December 2017
- 19 December 2017

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 the licensee's (EDF Energy Nuclear Generation Ltd (NGL'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 of Hartlepool Power Station covered the following:

- Engineering governance
- Control and supervision of operations and maintenance
- Fire safety
- Organisational capability
- Lightning protection

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.

ONR undertook two themed inspections at Hartlepool Power Station to evaluate engineering governance and control and supervision of operations. Each themed inspection involved a team of 2-4 ONR inspectors evaluating range of pertinent licence conditions over a period of three days. In the case of engineering governance, we evaluated: the capability of the station's engineering department; the training provided to the station's system engineers and sampled application of NGL's equipment reliability process. Overall, based on the evidence

sampled, the ONR inspectors judged that legal requirements were met. We judged that overall adequate resources were in place to manage safety system performance.

In respect to control and supervision, we observed a number of work activities and confirmed that they were being undertaken by suitably qualified and experienced persons. We confirmed that the activities were subject to control and supervision commensurate with their nuclear safety significance. We noted that a small backlog of low priority maintenance tasks had accumulated and requested that NGL develop a recovery plan. Overall, ONR inspectors judged that legal requirements were met.

In September, ONR conducted an inspection to evaluate compliance with the Regulatory Reform (Fire Safety) Order 2005. No non-compliances were identified during the visit. Inspectors noted positively, that Hartlepool Power Station had established an initiative to heighten its focus on fire safety measures.

ONR's Organisational Capability inspection evaluated NGL's process to identify and prioritise investment necessary to ensure safety systems continue to deliver their safety functions. Overall, we were satisfied that the prioritisation of work is informed by an effective understanding of the potential nuclear safety benefits and risks.

We undertook an inspection to evaluate implementation of safety case claims on lightning protection systems fitted to buildings and structures at Hartlepool Power Station, focusing on maintenance of the system. Overall, the ONR inspectors judged that legal requirements were being met. However, we requested further information from NGL to substantiate its decision not to proceed with modifications to enhance the reactor building/turbine hall lightning protection system. An entry on ONR's issues database was raised to track this issue to completion.

2.1.1 System Based Inspections

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

- SBI 06 - Emergency Generation.
- SBI 18 - Main Turbine Overspeed Protection

The emergency generation system provides capability to generate power to support post trip cooling systems in the event of a fault with the normal power supplies (derived from the national grid). At Hartlepool, this capability is provided by a number of gas turbine driven alternators with associated fuel oil and ancillary systems. The objective of the inspection was to evaluate the implementation of safety case claims on the equipment via inspections performed under the following site licence conditions:

- 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

After considering the totality of evidence examined during the inspection we judged that the Emergency Generation system met the requirements of the associated safety case. We awarded an inspection rating of Green (no action required) against the following licence conditions: LC10, LC24, LC27 and LC28. During our inspection we noted that electrical cabinets supplying three fuel oil transfer pumps were installed within an area covered by a water based fire suppression system. At the time of the inspection, NGL could not provide

sufficient evidence to demonstrate that the risk of disruption to the supply fuel to the Emergency Generators in the event of activation of the fire suppression system had been evaluated in the safety case. We have therefore assigned an inspection rating of Amber against LC23. NGL has subsequently implemented temporary measures to protect the cabinets from water ingress and has provided ONR with a programme of work to permanently protect this equipment. This work will be monitored by the ONR site inspector and tracked via an entry on ONR's issues database.

SBI 18 examined provision of devices to protect the station's main turbine generators from over speed faults. Such faults can lead to a destructive failure of turbine systems, posing risks to workers and adjacent plant. We found that NGL has effective arrangements control the availability of this equipment and that adequate training is provided to operations staff in the use and testing of these systems. After considering the totality of evidence examined during the inspection we judged that the Turbine Overspeed system met the requirements of the associated safety case. We awarded inspection rating of Green against LC10, LC23, LC24, LC27 and LC28.

2.2 Other work

2.2.1 Annual Review of Safety

The licensee's Annual Review of Safety for Hartlepool power station was held on 14 December 2017, attended by the ONR superintending inspector for operating reactors. The licensee presented its annual assessment of safety performance on the site and identified its priorities for continuous improvement for the next 12 months. ONR considered that the licensee's assessment was sufficiently comprehensive and had identified appropriate areas to improve its nuclear safety performance.

2.2.2 Emergency Exercise MINERVA

Emergency exercise MINERVA took place in November, designed to demonstrate the station's capability to deal effectively emergency incident occurring on the site. The exercise scenario, challenged participants from the emergency services as well as EDF NGL's own staff, to respond to a series of simulated counter terrorism threats and safety related plant faults. The exercise was observed by a team of ONR inspectors who concluded that the exercise was a successful demonstration of the site's emergency arrangements.

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.

Matters and events of particular note during the period were:

- In October, ONR undertook a reactive inspection to evaluate arrangements for controlling asbestos in response to a small number of minor incidents involving suspect asbestos containing materials. Based on a sample inspection of documents, discussions with key personnel and a plant walkdown, we judged that the overall standard of compliance was generally consistent with relevant good practice. ONR identified a minor area for improvement in relation to the station's asbestos register. NGL agreed to consider ONR's finding and implement necessary improvements.

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.

In November, ONR issued Licence instrument 563 granting agreement to the extension of the operating period of Hartlepool Reactor 2 until the unit's statutory outage which is planned to commence in January 2018.

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

Date	Type	Ref No	Description
November 2017	Agreement	563	Agreement to an extension of the operating period for Hartlepool Reactor 1

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 build:

New nuclear power station design approved:

The UK Advanced Boiling Water Reactor (UK ABWR), designed by Hitachi-GE, is suitable for construction in the UK, the regulators confirmed following completion of an in-depth assessment of the nuclear reactor design. The Office for Nuclear Regulation (ONR), the Environment Agency and Natural Resources Wales, the regulators who undertake the Generic Design Assessment of new reactor designs, are satisfied that this reactor meets regulatory expectations on safety, security and environmental protection at this stage of the regulatory process.

ONR has issued a Design Acceptance Confirmation (DAC) and the environment agencies have issued a Statement of Design Acceptability (SoDA) to Hitachi-GE.

Step 2 of nuclear reactor assessment:

We also announced on 16 November that we were progressing to the next phase of our assessment of General Nuclear System Ltd's UK HPR1000 reactor technology. This means we have now begun the technical assessment phase. Additionally, all members of the public can give their views and find out more information about the design by going to UKHPR 1000 website at www.ukhpr1000.com

Other news:

ONR response to BEIS impact assessment

The Department for Business, Energy and Industrial Strategy (BEIS) has recently published its Impact Assessment of the Nuclear Safeguards' Bill and that makes reference to ONR's regulation. We contacted BEIS to clarify two points within the document as part of our ongoing constructive engagement with them to develop a domestic safeguards regime as part of exiting Euratom.

The first is that ONR regulates the nuclear industry, it does not provide services to it. Secondly, the Government's policy has developed since the assessment was undertaken and the intention is to put in place a regulatory framework which is robust and as comprehensive

as Euratom. This means that we are not in a position to identify potential efficiencies in our regulatory approach at this stage.

As we support BEIS in its development of secondary legislation, we will provide advice to the Government to inform the anticipated impact assessment for nuclear safeguards regulation.

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>).

6 CONTACTS

Office for Nuclear Regulation
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

website: www.onr.org.uk

email: ONREnquiries@onr.gsi.gov.uk

This document is issued by the Office for Nuclear Regulation (ONR). For further information about ONR, or to report inconsistencies or inaccuracies in this publication please visit <http://www.onr.org.uk/feedback.htm>.

© Office for Nuclear Regulation, 2018

If you wish to reuse this information visit www.onr.org.uk/copyright.htm for details.

Published 02/18

For published documents, the electronic copy on the ONR website remains the most current publicly available version and copying or printing renders this document uncontrolled.