



Office for Nuclear Regulation (ONR) Site Report for Dungeness B

Report for period - 1 October to 31 December 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 to members of the Dungeness Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/lrc/>).

Site inspectors from ONR usually attend Dungeness Site Stakeholder Group meetings where these reports are presented 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. ONR inspectors undertook inspections at Dungeness B Power Station, on the following dates during the quarter:

- 2– 5 October
- 22 – 23 October
- 23 – 24 October
- 8 November
- 12 - 15 November
- 4 - 6 December

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, routine inspections at Dungeness B covered the following compliance inspections:

- Licence condition 10 - Training
- Licence condition 11 - Emergency arrangements
- Licence condition 28 - Examination, inspection, maintenance and testing

5. An unplanned compliance inspection against LC10 was primarily focussed on the station's emergency shift training exercises. The exercises have been rolled out since 10 October 2018 and there have been five to date. The nominated site inspector observed one exercise scenario "EDDINGTON" which consisted of a nuclear emergency initiated by a seismic event which included casualty recovery. The site inspector observed the Alternative Access Control Point (AACP) team and a single deployment team. Other observers included the station's own internal regulator and Berwicks who train the station's command and control centres response teams. The site inspector was supported by an ONR conventional health and safety inspector who observed the station simulator responses and emergency command centre.

6. The site inspector judged that an inspection rating of Green was appropriate for the LC10 compliance inspection and noted that this inspection also met the requirements of LC11 (6) in the provision of appropriate training in ensuring that persons responding to an emergency on the site are aware of the roles and duties they are expected to perform.

7. The LC 11 compliance inspection looked at the licensee's emergency handbooks (EHB) which are located in defined areas of the station as defined within the station's departmental instructions. The site inspector examined several EHB's of which he identified a significant number that:
 - i) did not reflect the current asset management system revisions of particular sections;
 - ii) were absent as defined within the stations emergency preparedness document, or
 - iii) did not contain sections that were defined within the station's arrangements.
8. In addition, the station's management systems did not fully control the management of EHB updates therefore ensuring all copies reflected the correct section revisions. Notwithstanding these observations, the sampled EHB's in the key response centres were all correct in their content. In light of this finding the site inspector was of the opinion that the station could still have responded effectively if an incident arose.
9. Due to the significance of the inspection findings, the site inspector rated the inspection as amber (seek improvement). The application of ONR's enforcement management model (EMM) indicated that an enforcement letter was appropriate. A regulatory issue has been raised to track the station's progress in addressing the shortfalls that were identified and a regulatory enforcement letter has been sent to the station (see table 1 below).

System Based Inspections (SBI)

10. In addition to our compliance inspections based on the conditions attached to the nuclear site licence, ONR inspectors also inspect operating reactors against safety-related systems. Each site has a safety case that demonstrates how it operates safely. For Advanced Gas-cooled Reactors, each of the twenty-five key systems will be inspected against the claims made upon them by the safety case. The aim is to systematically inspect all the significant safety related systems within a five-year cycle. ONR considers that this will provide additional assurance that operations on the Dungeness 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
11. During the reporting period no safety related system was inspected.

2.2 Other work

12. During this reporting period, the site inspector held several meetings relating to the progress of regulatory issues, the outages at reactor 21 and reactor 22, the follow up of reported incidents on station, and the station's response to ONR's Direction Licence Instrument No 557 under LC15(4) that was issued on the 11 September 2018.
13. Also in this reporting period, several LC28 compliance inspections were undertaken by various specialist inspectors which will form part of ONR's assessment relating to the issue of a licence instrument for consent under LC30(3) for return to service of Dungeness B Reactor 22 following its periodic shutdown.

3 NON-ROUTINE MATTERS

14. 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.
15. Two ONR structural integrity specialist inspectors have undertaken several engagement meetings with the station in response to it’s discovery of cracking in the main steam line and site corrosion issues. In addition, an unplanned LC28 compliance inspection to inspect work recovery work by the licensee has also been undertaken.
16. The unplanned LC28 inspection reviewed the scope of the licensee’s inspection programme, prompted by the discovery of cracking in the main steam system of boiler 27. The methods applied, quality control arrangements, record keeping and sentencing of results were inspected and the licensee provided evidence to justify scope, techniques and treatment of inspection data. In each respect the specialist inspectors found that evidence to be adequate. Overall the inspection was found to be satisfactory and, based on ONR inspection rating guidance was award an inspection rating of green (no further action required).

4 REGULATORY ACTIVITY

17. 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.
18. As reported last quarter, ONR issued a Direction (Licence Instrument No 557) under LC15 (4) on the 11 September 2018 for the station to review and reassess safety of concealed systems in relation to corrosion. The station responded on the 3 December 2018. ONR has reviewed the information provided by the station and also completed a number of inspections at Dungeness B in order to monitor progress of its event recovery. ONR has concluded that the requirements of the Direction have been met and that Dungeness B has provided adequate evidence to demonstrate that such risks are ALARP with both reactors currently shut down. Consequently, the Direction issued to Dungeness B is considered closed.
19. However, prior to return to service (RTS) of either reactor at Dungeness B, NGL has committed to completing a programme of inspection and remediation activities which was identified within the station’s Direction response document. The successful completion of this work will be necessary for ONR to be able to support a return to full power operation.

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

| Date | Type | Ref No | Description |
|------------|--------------------|--------|--|
| 18/10/2018 | Enforcement letter | 71316 | Direction under Licence Condition 15 (4) - Pipework, Material Condition, CUI - Findings following repeat inspection at DNB |
| 08/11/2018 | Enforcement letter | 71317 | EDF Energy Nuclear Generation Ltd Dungeness B Power Station |

| | | | |
|------------|--------------------|-----------|--|
| | | | Nuclear Site Licence No: 61 Licence Condition 32 – Accumulation of radioactive waste |
| 03/12/2018 | Enforcement letter | 71318 | REVIEW AND CONSIDERATION OF EC 357719 – Dungeness B Graphite Weight Loss Update |
| 06/12/2018 | Enforcement letter | 71319 | ONR Review of NGL's Response to the Direction Issued under LC15(4) - Periodic Review Pipework, Material Condition, Corrosion Under Insulation and Concealed/Buried Systems |
| 17/12/2018 | Enforcement letter | 71320 | Licence Condition 11 - Emergency Arrangements |
| 18/10/2018 | Direction | DNB71316N | Direction under Licence Condition 15 (4) - CUI, Pipework (Amendment to LI 557 to extend the compliance date) |

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

5 NEWS FROM ONR

October:

- We welcomed the [publication](#) of the key review of operational safety performance at Torness nuclear power station, published by the International Atomic Energy Agency and the UK government. The report highlights eight areas of good practice at Torness and offers proposals for further improvements, which we fully support.
- Following our decision to prosecute, EDF Energy Nuclear Generation Ltd and Doosan Babcock Ltd pleaded guilty to offences at Hinkley Point B under the Health & Safety at Work etc. Act 1974, section 3(1) and the Work at Height Regulations 2005, Regulation 4(1) respectively. The incident was a conventional health and safety matter, with no radiological risk to workers or the public. [A sentencing date](#) has been set for 1 February 2019 at Taunton Crown Court.

November:

- Following a rigorous procurement process, we appointed six nuclear supply chain organisations to our new [Technical Support Framework \(TSF\)](#). The new TSF, which came in to effect on 1 November 2018, has been established to provide a renewed and modernised framework for procuring technical support. We use this technical support to obtain, for example, expert technical assessments, access to specialist software or modelling, or access to niche skill sets that we do not retain in-house.
- The revised Nuclear Safety Directive introduced a European system of Topical Peer Review in 2017 and every six years thereafter. We played a leading role in the preparations for the first European 'Topical Peer Review' on Ageing Management of Nuclear Power Plants and welcome the publication of the [first peer review report](#) by the European Nuclear Safety Regulator Group. We are pleased that a number of our experts made a valuable contribution to the exercise alongside 16 European countries as well as Norway, Switzerland and Ukraine. The UK report was authored jointly between ourselves, EDF Nuclear Generation Ltd and EDF-NNB GenCo.

- [The Atomic Weapons Establishment \(AWE\) was fined £1 million](#) after admitting offences under Section 2 (1) of the Health and Safety at Work etc. Act (1974). The incident, which occurred on 27 June 2017 was a conventional health and safety matter and there was no radiological risk to workers or the public. The prosecution was the result of our investigation into the incident.
- In conjunction with the Environment Agency, we announced the completion of our [initial high level scrutiny](#) of the UK HPR1000 reactor design.
- We provided NNB Genco (HPC) Ltd (NNB GenCo) with [consent](#) to commence the unit 1 Nuclear Island concrete pour at Hinkley Point C (HPC). We also hosted our third webinar to explain our permissioning role for the Nuclear Island concrete pour at HPC and to provide information on our work to ensure that the new nuclear power station is built to the standards expected in the UK. Amongst others, a number of Site Stakeholder Group members joined the webinar and we received excellent feedback. We are planning further webinars on various topics in 2019. If you would like to find out more, please contact the ONR Communications team at contact@onr.gov.uk
- After 16 years of decommissioning work, Bradwell became the first of the Magnox nuclear power stations to receive our permission to enter into a period of “care and maintenance”.
- The nuclear safeguards regulations which will enable ONR to set up the domestic safeguards regime following Euratom withdrawal, were laid in Parliament. The Government published the details, [alongside its response and the feedback to consultation on the draft regulations on its website](#).

December:

- [Court proceedings continued](#) in our [prosecution of Sellafield Ltd](#) for offences under Section 2 (1) of the Health and Safety at Work etc Act (1974).
- Reactor 3 at Hunterston B remains offline after being shut down following a routine inspection into cracks in its graphite core, in March 2018. [Cracking of the graphite bricks in Advanced Gas-cooled Reactors](#) such as Hunterston B is expected as the reactors age. However, the number of cracks found during the inspection of Reactor 3 has led to the licensee, EDF Nuclear Generation Limited, carrying out further inspections of the core. Reactor 4 at Hunterston B was taken offline in October for an inspection of its graphite core. EDF Energy has submitted a safety case for Reactor 4 and is preparing one for Reactor 3. We will assess both safety cases to determine whether the reactors are safe to return to service. Neither reactor may restart without our consent, which we will give only if it is safe to do so.
- The Government published a [Written Ministerial Statement](#) on implementing Geological Disposal, announcing the publication of its [Working With Communities](#) policy and the launch of a consent-based process to find a site to host a Geological Disposal Facility (GDF). While we have no formal role in identifying the site for a GDF, any future facility will need to meet the high standards of safety and security required of a licensed nuclear site.

All our latest news is available on our website www.onr.org.uk

6 CONTACTS

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