



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

Report for period 1 July to 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 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:

- 9th - 16th July
- 25th - 26th July
- 6th - 9th August
- 12th - 13th September
- 10th - 15th September
- 25th September

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 2 - Marking of the site boundary
- Licence condition 4 - Restrictions on nuclear matter on the site
- Licence condition 7 - Incidents on site
- Licence condition 16 - Site plans, designs and specifications
- Licence condition 26 - Control and supervision of operations
- Licence condition 28 - Examination, inspection, maintenance and testing
- Licence condition 32 - Accumulation of radioactive waste

5. The LC2 inspection primarily focussed on the licensee's arrangements for compliance with LC 2(1) and LC 2(4), covering prevention of unauthorised entry onto site, and marking of and properly maintaining the licensed site boundary. The inspection confirmed that Dungeness B met legal requirements but the inspection did note that some signage was confusing in specific areas and that the boundary fence was in need of maintenance in several areas, but was observed at the time of the inspection to be complete in all areas. The station has committed to address these minor observations and this will be followed up by the site inspector. The inspection was rated as Green (no further action required).

6. The LC 4 compliance inspection examined the arrangements for management of nuclear fuel and organisational responsibilities. There was a clear link from the Licensee's arrangements to the station's departmental instructions. The inspection verified that these

documents adequately cross-reference against other licence condition compliance arrangements that underpin Fuel Route movement activities. The site inspector was satisfied that the licensee's arrangements and their implementation are in compliance with LC4 and are suitable and sufficient. The inspection was rated as Green.

7. The LC7 inspection noted that the station was able to demonstrate compliance against its arrangements. Reporting of incidents on site is actively encouraged and is inclusive of the contract partners that work at the station. Evidence of organisational learning from condition reports raised at the station is demonstrable from the licensee's quarterly station trend report. Trending of particular areas of interest is undertaken to prevent reoccurrence. ONR rated the inspection as Green.
8. The LC16 was undertaken in conjunction with the LC2 compliance inspection (see above). The inspection confirmed that the site plan adequately identified the boundaries of the nuclear licenced site and the major nuclear safety significant buildings (or plant). Some minor observations were noted which will be followed up by the ONR nominated site inspector. Notwithstanding these minor observations, the inspection was rated as green.
9. A joint inspection was carried out by ONR with the licensee's own internal safety regulator (Independent Nuclear Assurance, INA) during the licensee's Rapid Tending Review (RTR). The aim of the RTR was to identify performance shortfalls in the early stages of Reactor 22 periodic shutdown to enable station management to reduce or eliminate undesirable behaviours and conditions which could have an adverse impact on outage success. The ONR element of the inspection considered LC26 and LC28. ONR rated both licence conditions as Amber. However, given that the licensee's own internal regulator RTR team also identified these as significant shortfalls during the inspection, ONR was in this instance content for the INA RTR team to monitor the station's progress in addressing them during the Reactor 22 periodic shutdown who will report back to the site inspector of there completion
10. The LC32 compliance inspection focused on the Licensee's progress in delivering an improvement plan and addressing the shortfalls to support closure of a previously raised regulatory issue. Based on the evidence sampled, some improvements to the arrangements and facilities had been made. However, this was insufficient to demonstrate significant and sustained improvements in the management of radioactive waste and the Decontamination . Shortfalls were identified around standards of housekeeping and accumulations of unprocessed low level waste Based on these observations, it was considered that insufficient progress had been made during the intervening 18 month period to address these shortfalls previously identified; therefore an inspection rating of **RED** was assigned. Consequently, the application of the enforcement management model determined an Enforcement letter be issued to the site to address the following shortfalls:-
 - The securing of sufficient resource (Environmental Safety Technician) for radioactive waste processing;
 - To establish clear ownership and accountability of the decontamination centre;
 - To establish a five year radwaste management plan, with the appropriate governance and oversight, in line with licensee's arrangements.
11. The above LC2, 7 and 16 compliance inspections were observed by representatives from the Department for Business, Energy and Industrial Strategy (BEIS) to gain a deeper understanding of the role of an ONR site inspector.

System Based Inspections (SBI)

12. 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

13. During the reporting period, the following safety related system was inspected:

- Liquid Radwaste system

14. SBI 02 - Liquid Radwaste system - Based on the areas sampled during this system based inspection, ONR judged that the system adequately fulfils the requirements of the safety case. The inspection identified several positive areas such as compliance against LC10, LC24 and 34, which were rated Green. However, shortfalls were identified for LC23 where ONR identified a significant number of unplanned Environmental Condition for Operation (ECO) entries on the Active Effluent Water Treatment Plant during the previous 12 months, some appearing to be raised retrospectively. For LC27, ONR observed that the carbon dioxide (CO₂) alarm on the local AEWTP control panel was lit up and an operator was working in the affected area where the short-lived CO₂ alarm had just occurred. No action to understand the cause of the alarm was observed and there appeared to be an acceptance of these short-lived CO₂ alarms. For the LC28 element of the SBI, ONR acknowledged that the plant is aging and there is a five year programme of work in place to resolve some of the long-standing issues. Whilst the Licensee has a maintenance schedule in place, in some cases the maintenance carried out does not account for the potential failure mechanisms. In addition, ONR judged that the maintenance regime did not adequately address the ageing plastic pipework. In light of the observations made by ONR during the SBI, ONR rated LC 23, LC27 and LC28 as Amber. Whilst a number of shortfalls were identified, overall ONR judged that the liquid radioactive waste system fulfilled the requirements of the safety case. The shortfalls that were identified were captured in a regulatory issue which will track the station's progress in resolving it.

2.2 Other work

15. During this reporting period, the site inspector held several meetings relating to the progress of regulatory issues and plant performance. In addition, the station undertook its Annual Review of Safety (ARoS) which is a joint meeting between the Licensee and ONR, with the objective of reviewing the station's safety and operational performance throughout the past year and looking forward at planned improvement activities that will be implemented in the forthcoming year and beyond. The ARoS was conducted over two half days consisting of a plant walk on the first half day followed by a half day meeting consisting of a series of slideshows and discussion regarding the station's future focus.
16. During this reporting period several LC28 compliance inspections have been undertaken by various ONR specialist inspectors which 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

17. Two ONR Structural Integrity Inspectors attended site on 25 and 26th July 2018 to undertake an LC28 compliance inspection with respect to corrosion and concealed systems. The inspection reviewed the progress that the licensee had made on site in response to the required actions raised in previous ONR enforcement communications. The inspection identified that Dungeness B falls short of where ONR would have expected it to be at this stage following previous ONR inspections and in comparison with the progress made by the rest of the fleet. Dungeness was unable to demonstrate that it fully understands the challenges posed to the station from corrosion.
18. Based on the evidence sampled, ONR judged that the site had failed to adequately deliver improvements previously identified in enforcement communications. Therefore, an ONR inspection rating of **RED** was given. In light of this rating, ONR's Enforcement Management Model (EMM) was applied to determine the most appropriate enforcement action. This concluded that a Direction under Licence Condition (LC) 15 (4) was an effective and proportionate response (see next section).

4 REGULATORY ACTIVITY

19. 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.
20. ONR has issued DNB a direction Licence Instrument No 557 under LC15(4) on the 11 September which directs EDF Energy Nuclear Generation Ltd to carry out a review and reassessment of safety, addressing the corrosion of concealed systems that fulfil a safety function, and submit a report of the review and reassessment to the Office for Nuclear Regulation. The Office for Nuclear Regulation specifies that this review and reassessment includes:
 - 1) All concealed systems, structures and components at risk from corrosion and that fulfil a safety function.
 - 2) A clear demonstration that the risk arising from failure of concealed systems that fulfil a safety function at Dungeness B continues to be as low as reasonably practicable (ALARP). This should take full account of any identified corrosion, or any uncertainty from lack of recent inspection results. Judgements should be based upon sound evidence.
21. The review and reassessment report must be submitted to ONR by 3rd December 2018.

5 NEWS FROM ONR

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.

6 CONTACTS

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