



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

Report for period - 1 January to 31 March 2019

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:
 - 23 – 24 January
 - 11 – 14 February
 - 12 – 13 March

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).
 - the Regulatory Reform (Fire Safety) Order 2005
 - the Nuclear Industries Security Regulations 2003
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.

Compliance Inspections

4. In this period, routine inspections at Dungeness B covered the following compliance inspections:
 - Licence condition 7 – Incidents on the site
 - Licence condition 23 - Operating rules
 - Licence condition 24 – Operating Instructions
 - Licence condition 27 - Safety mechanisms, devices and circuits
 - Licence condition 28 - Examination, inspection, maintenance and testing
 - Licence condition 36 – Organisational Capability
5. The site inspector carried out a planned compliance inspection against LC7 (Incidents on the site). The inspector observed the licensee's daily screening meetings throughout his visit to the station and sampled the licensee's arrangements for screening and sentencing of events and the quality of investigations that were undertaken. He also sampled the subsequent actions that were raised from the station's investigations for their timeliness of completion and sampled the deferral process in extending an action completion date. A sample inspection was also completed of the station's organisational learning processes including self-assessments and independent evaluation. Overall, from the sample inspected, the site inspector was satisfied that the licensee's arrangements and their implementation in compliance with LC7 were suitable and sufficient and an IIS rating of Green (no action required) against LC7 was awarded.

6. A compliance inspection was also carried out into LC36 (Organisational Capability). The site inspector observed the licensee's management of change steering group meeting, sampled the licensee's baseline statement including management of change assessments and the control of their implementation, the management of change register, risk assessments and the station's baseline statement database. Overall the inspector was satisfied that the licensee's arrangements and their implementation in compliance with LC36 were suitable and sufficient and an IIS rating of Green against LC36 was awarded.
7. On 12 – 13 March 2019 a specialist external hazards inspector undertook an on-site compliance inspection in relation to seismic hazards and drought. The inspection considered the following LCs:
 - LC23 Operating rules
 - LC24 Operating instructions
 - LC27 Safety mechanisms, devices and circuits
 - LC28 Examination, inspection, maintenance and testing

System Based Inspections (SBI)

8. 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
9. During the reporting period no safety related system was inspected.

2.2 Other work

10. During this reporting period, the site inspector held several meetings relating to the progress of regulatory issues, the ongoing double reactor outage for reactor 21 and reactor 22 and the follow up of reported incidents on station.
11. In this reporting period, several engagement meetings have taken place between ONR and DNB regarding cracks that were discovered in main steam pipework of R22 during its 2018 periodic shutdown and NGL's corrosion event recovery work at DNB.

3 NON-ROUTINE MATTERS

12. 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.

13. The nominated site inspector carried out an unplanned reactive compliance inspection following notification of incident which highlighted a non-compliance with a station operating instruction (SOI). The operating instruction had not been completed at the required intervals for a significant period of time. The station had correctly identified that under the LC7 incident reporting arrangements, this event required the licensee to consider formally reporting the event to ONR. In this instance, the incident was not formally reported and was instead reported to the site inspector under routine reporting. The subsequent investigation that was undertaken into the event by the licensee was, when reviewed by the site inspector, found to be below the expected standard.
14. In the inspector's opinion, given that a required SOI had not been undertaken for a significant period of time over a number of shifts he considered this was a compliance failure against LC24. In addition, given that a reasoned explanation was not provided for the judgement to not formally report the event to ONR, and the below standard quality of the subsequent investigation report, he also considered there was also a compliance failure against LC7. He therefore rated the LC7 and LC24 compliance arrangements as Amber (seek improvement). An enforcement letter (ENF-EL-025) under LC7 and LC 24 was issued on the 26 February 2019 and is awaiting a response from the station regarding the regulatory actions raised. An ONR regulatory issue will be used to monitor the station's improvements in this area.
15. Reactor 22 Outage Maintenance Schedule work has been completed, the normal return to service checks will be carried out during start-up. ONR has undertaken and completed its outage inspection work however, two major areas of work have been identified which need to be satisfactorily resolved before return to service, these are the:
- Main steam line cracking
 - Corrosion under insulation.
- These affect both reactors, with Reactor 22 having been shutdown, for outage, since the end of August 2018 and Reactor 21 shutdown, initially for a routine double reactor shutdown during the planned Reactor 22 outage, in September 2018. The station is taking advantage of the long shutdowns to carry out some plant modifications, which were originally planned after the outage.

Main steam line cracking

16. During the 2018 periodic shutdown of Reactor 22, defects were found during a planned inspection of a section of main steam pipework. This prompted further inspections of the main steam system of both reactors. Several more defects of varying significance have been found. The licensee has done further work to support a safety case for return to service. This includes making repairs, reviewing operating records, undertaking metallographic examination and conducting structural integrity analyses. These aspects are among those being monitored by ONR to support its coming assessment of the safety case. At the time of writing, both reactors remain shutdown while inspections, remediation and analysis continue.

Corrosion under insulation

17. As part of NGL's ongoing corrosion and main steam event recovery programs. NGL have allocated significant resource, both in financial terms and with supply of expertise from across the fleet to assist DNB. For example, in excess of 300m of pipework associated with reactor cooling systems has been renewed, along with renewal of numerous seismic pipework supports and remediation of CO2 storage vessels. In light of this, and from evidence gained during regular inspections at DNB, the licensee has identified a number of additional commitments that will be fulfilled prior to return to service of either reactor at DNB. These commitments will enable the licensee to demonstrate to ONR that the risks posed by continued operation of the safety significant concealed systems at DNB are

tolerable and ALARP. ONR continue to engage with NGL to monitor its progress against the commitments made.

4 REGULATORY ACTIVITY

18. 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.

19. During the period, the following enforcement letter was issued, as noted in paragraph 14.

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

Date	Type	Ref No	Description
26/02/2019	Enforcement	ENF-EL-025	LICENCE CONDITION 7 (Incidents on the site) and 24 (Operating instructions)

5 NEWS FROM ONR

Enforcement Action

A summary of enforcement action is provided below. Further detail is available on [our website](#).

- Improvement notice issued to Sellafield Ltd on 4 January 2019 – requires improvements to be made in its principal contractor arrangements for construction, design and management.
- On 1 February, following ONR’s prosecution, EDF Energy Nuclear Generation Ltd and Doosan Babcock Ltd were fined £200,000 and £150,000 respectively following an incident where a worker fell from height at Hinkley Point B power station in 2017.
- Two improvement notices issued to two transport logistics companies on 4 February following breaches in regulations for the safe transport of radioactive materials.
- Two improvement notices issued to EDF Energy on 20 February following an incident on 19 November 2018 at Heysham 1, which resulted in injury to three EDF Employees.

**Although outside the current reporting period, we can confirm that on 2 April 2019, Sellafield Ltd were fined £380,000 following ONR’s prosecution for safety breaches relating to equipment used for the processing of plutonium.*

Regulatory updates

Following the introduction of new integrated [Environmental Authorisations Regulations in Scotland](#), the [MOU between ONR and the Scottish Environmental Protection Agency](#) has been updated. The MOU ensures effective cooperation and collaboration in the regulation of nuclear safety, security, radioactive materials transport, nuclear safeguards and environmental

protection on nuclear licensed sites and at other sites where both ONR and SEPA have regulatory functions.

In February, [a new nuclear site licence was granted to Tradebe Inutec](#) for their Winfrith site in Dorset. A new site licence was required following Tradebe Inutec's acquisition of buildings and land at the Winfrith site from the Nuclear Decommissioning Authority (NDA) in February 2019.

We published a report detailing safety "events" that took place in the UK between 2015-2017 in March. The report details the 56 safety significant events that took place between April 2015 and December 2017 – describing each event, the dutyholder's response, and the actions taken by the ONR. The full report is available on our [website](#).

Stakeholder Engagement

In February, our Chief Nuclear Inspector, Mark Foy and Technical Director, Anthony Hart hosted a webinar which focused on the first Topical Peer Review of 'Ageing management of nuclear power plants and research reactors.' Further details about the webinar are available on our [website](#).

We published our [2018 Stakeholder Survey report](#) in February following the survey in October/November last year. Stakeholders from across the sector were invited to take part in the survey with 329 responses received, providing valuable insight into how we are viewed by our stakeholders. The full report is available on our [website](#).

On 28 March, we held our NGO Forum in Manchester and were delighted to welcome 15 NGO representatives from 12 organisations. We'll be making the minutes, agenda, presentations and pre-event briefing papers available on our website over the coming weeks.

Corporate news

In February we announced the appointment of Mark McAllister as the new Chair of ONR. Mark will join ONR from 1 April, succeeding Nick Baldwin CBE.

We were delighted that our Chief Executive was recognised as Transformational Leader at the Northern Power Women Awards 2019, an event that celebrates the women and men working towards accelerating gender diversity across the Northern Powerhouse. Adrienne won the award in recognition of her work in leading ONR through significant change while, in parallel, driving gender balance.

ONR has been recognised for its commitment to equality, diversity and inclusion by gaining accreditation to the National Equality Standards (NES).

We are embarking on the final year of our ONR Strategic Plan 2016-2020. So we are now starting to look ahead to what the next five years will bring and beginning to develop our new strategy for 2020-25. We're not doing this alone; we've already started talking to our staff and we are asking our stakeholders for their views to shape our plans. We are really keen to hear from SSG and LLC members and attendees to help us develop our strategic aims and objectives. We'd like to know:

- What is working well that we should keep doing and/or do more of?
- What do you think our top regulatory priorities should be in the 2020s?
- What do you think is missing from our current Strategic Plan that needs to feature in the next one?

We intend to consult on our draft strategy in the autumn, but in the meantime, if you'd like to share your comments and suggestions please email us at: contact@onr.gov.uk . We look forward to hearing from you.

6 CONTACTS

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

website: www.onr.org.uk
email: contact@onr.gov.uk

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