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

Report for period - 1 January to 31 March 2020

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/llc/).

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.

TABLE OF CONTENTS

1 INSPECTIONS

1.1 Dates of inspection

1. ONR inspectors undertook inspections at Dungeness B Power Station, on the following dates during the quarter:

    - 13-17 & 28-29 January 2020
    - 4-7 & 17-21 February 2020

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.

Compliance Inspections

4. In this period, routine inspections at Dungeness B covered the following topics:

    - Licence condition 11 - Emergency arrangements

5. During this reporting period the nominated site inspector supported by a specialist project inspector undertook a compliance inspection of LC11 which covered the station's Emergency Preparedness and Response Capability Map (EPRCM). This is a framework used to evaluate emergency planning and response in the context of seven subject areas. ONR aims to evaluate all areas of the EPRCM on each operating reactor site during a five year cycle. During this inspection ONR inspectors sampled:

    - Several sections of the station's Capability Map
    - Conducted a walk-down of several areas relating to emergency response on site
    - Sampled the emergency scheme roles and discussed the station oversight and succession management for these roles

6. In relation to LC11, the inspectors judged that an inspection rating of Green (no formal action) was warranted. There were no findings from this inspection that could significantly undermine nuclear safety.

System Based Inspections (SBI)

7. In addition to our compliance inspections based on the conditions attached to the nuclear site licence, ONR also inspects 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 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

8. During the reporting period a system-based inspection (SBI) was undertaken on the station's Gas Circulators and supporting systems. The inspection was undertaken by two Fault Studies Specialist Inspectors, a Mechanical and Electrical Engineering Specialist Inspector, and the Nominated Site Inspector. The aim of the inspection was to confirm that the Gas Circulators, with associated operating instructions and maintenance schedule, were able to meet the safety case functional requirements.

9. The inspection consisted of a plant walkdown of key areas associated with the Gas Circulators System. This included the Gas Circulator Hall for each reactor, containing the gas circulators and associated main motors, very low speed pony motors, and low speed/high speed pony motors. Inspections were also undertaken on the training records of a number of individuals associated with the Gas Circulators System. No significant shortfalls were identified in this area.

10. An examination of Technical Specifications relevant to the Gas Circulators System was also undertaken; the station demonstrated the link between the safety case and the Technical Specifications for Gas Circulator vibration monitoring. In addition, the Central Control Room Operators demonstrated compliance with the Technical Specifications for Boiler Quadrant Requirements. The inspection team sampled a recently changed Station Operating Instruction relating to Boiler Tube Leaks. The station's simulator was used to demonstrate the required actions in response to a Boiler Tube Failure from power by the station's Simulator Instructor.

11. From the sample inspected, the ONR inspection team judged that compliance against LC 10, 23, 24, 27, 28 and 34 met legal requirements and therefore a 'Green' rating was given for all LC covered in this inspection. The Gas Circulators System was judged to meet the safety case requirements.

2.2 Other work

Readiness Inspections

12. During January and February, ONR undertook two readiness inspections in order to build regulatory confidence in the licensee's ability to adequately conduct its activities ensuring safe operation of the reactors should they be allowed to return to power. Given that the reactors had been shut down for nearly a year and a half at the time of the inspection, a significant number of new staff had arrived at the station. In addition, a number of significant events e.g. including International Nuclear Event Scale (INES) events, ONR enforcement letters, as well as the station being in enhanced regulatory attention provided the scope of inspection areas to be sampled by ONR.

13. The two inspections involved Human and Organisational Capability (HOC), Mechanical, Electrical Engineering, Control & Instrumentation Engineering and Structural Integrity specialists. The licence conditions covered were LC7 (incidents on the site), 10 (training),

12 (duly authorised and other suitably qualified and experienced persons), 17 (management systems), 22 (modifications), 23 (operating rules), 26 (control and supervision of operations) and 28 (maintenance). ONR observed the implementation of innovative solutions to improve plant, processes, and engagement of teams. Overall, ONR found that Dungeness B have applied an analytical process to determine the steps needed to restore operational focus and mindset as a result of the extended period of shutdown**.** Several recommendations and regulatory issues were raised; however these were not identified as return to service concerns that would prevent ONR's permissioning for the reactors to start operating.

14. A limited joint ONR/INA follow-up inspection, to be planned shortly before a return to service date, will be carried out to ensure inspection actions have been completed, and that circumstances have not significantly changed since the readiness inspections that were in January and February.

Visit by ONR's Chief Inspector and ONR Chair

15. In early February ONR's Chief Inspector and the ONR Chair undertook a visit to the station to meet the staff and learn more about the investment work that has been taking place at the station. The visit included a plant visit of the main work areas for the corrosion event recovery work, the radiation controlled area and the station's simulators. A series of presentations were also given by the station covering its performance Improvement Plan.

3 NON-ROUTINE MATTERS

16. 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.

17. There were no incidents of note during this reporting period.

Return to Service (RTS) Update

18. Both reactors are safely shutdown due to the ongoing repair of widespread steel corrosion across the station, cracking found in the main steam lines of the boilers and potential degradation issues associated with boiler tubes. The reactors will only be permitted to return to service when ONR is satisfied that the issues identified have been resolved.

19. The corrosion event recovery has progressed to the point where inspections required to support RTS are now complete, the necessary defect remediation required for RTS has been established and is in progress. Risk informed defect rectification work is also planned for a number of years after the return to service of the reactors.

20. Boiler steam main line inspections are complete and some repairs have been carried out. A number of plant enhancements are in progress. The safety case for return to service is complete and is subject to assessment and permissioning by ONR.

21. Potential issues related to a previously known in-service degradation mechanism that could affect specific sections of the boilers are being addressed by the station. Any justification for continued operation will be supported by a robust safety justification, which ONR will assess prior to RTS of either reactor.

4 REGULATORY ACTIVITY

22. 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.

23. During this period, ONR issued an enforcement letter on the 8 January 2020 which was in response to a number of conventional health and safety incidents that occurred at the station involving contractors between October and November 2019. The station has since responded to ONR's letter and has provided an action plan to address the findings. The site inspector is content with the station's plan and will monitor the implementation of it.

24. ONR issued a Licence Instrument (Specification) for EDF NGL to submit High-activity Sealed Source (HASS) records to ONR for movements of HASS on an annual basis. The issuing of this new Specification was to reflect changes in the Council Directive 2013/59/Euratom and corresponding UK legislation.

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

Date	Type	Ref No	Description
13/01/2020	Specification	2020/8415	Specification to submit HASS returns to ONR
08/01/2020	Enforcement Letter	2020/5628	Control of Contractors

5 NEWS FROM ONR

Below are summaries of key activities over the last three months. Further detail is available on our website.

Covid-19 (Coronavirus) (ONR position)

- ONR is continuing to protect society by securing safe nuclear operations during the Coronavirus pandemic. ONR staff continue to work from home, in line with government advice. We have considered our priorities, have deferred non-critical activities, and are carrying out as much of our work as possible via videoconference, phone and email. Our regulatory focus includes assurance, where appropriate, from site licensees that they are applying the public health measures introduced to reduce the spread of coronavirus. A limited number of our inspectors can, as key workers, continue to travel to site as necessary to conduct urgent and essential regulatory inspections. Nuclear sites have been reducing non-essential activities so as to protect staff, infrastructure, and the public. As always, we are regulating those activities to ensure they are carried out safely and securely. ONR's latest position can be found on our website.

Enforcement Action

- ONR served an Enforcement Notice on Urenco UK Ltd following a fire safety inspection at its Capenhurst Works in Cheshire during December 2019. The notice was issued in response to shortfalls identified in the fire alarm and detection systems at one of the site's facilities.

- In February ONR announced that Sellafield Limited had complied with an Improvement Notice relating to staff training, operating procedures and procedural adherence that they were served with in May 2019.

Regulatory Updates

- In January ONR published an update to its Safety Assessment Principles, to incorporate some relatively minor revisions including typographical corrections and updates to reflect changes to the UK's nuclear regulatory framework since 2014.
- In February ONR completed Step 3 of the Generic Design Assessment (GDA) of the UK HPR1000 design, and took the decision to progress to Step 4 of the GDA. During Step 3, ONR increased its regulatory scrutiny and undertook a more detailed assessment of the design, focusing on the methods and approaches used by the GDA Requesting Party to underpin their safety and security claims.
- In March we published the Quarterly Statement of Civil Incidents for the period 1 October to 31 December 2019. During this reporting period there were two civil incidents at nuclear licensed sites within Great Britain that met the Ministerial Reporting Criteria as defined within the Nuclear Installations (Dangerous Occurrences) Regulations 1965 and ONR guidance in relation to notifying and reporting incidents and events.

Stakeholder Engagement

- On 15 January ONR launched a four-week public consultation on its draft 2025 Strategy. Once agreed, the strategy will set our direction and priorities for the next five years. To support the public consultation we held a webinar for NGOs and other stakeholders in which our Chief Executive, Adriènne Kelbie, and Technical Director, Anthony Hart, gave an overview of the strategy and welcomed questions and comments. The strategy is due to be published in May 2020.
- In January, ONR achieved Level 3 Disability Confident (Leader) status, recognising our desire to put people first and create an environment in which everyone can thrive. The government-backed scheme encourages employers to think differently about disability and take action to improve how they recruit, retain and develop disabled people.
- In February, we announced the appointment of two **new members to the ONR Board.** Dr Janet Wilson took up the appointment on 1 April 2020 and Tracey Matthews will take up her appointment on 1 June 2020 – both appointments are for five year terms.
- In February more than 70 stakeholders involved in the transport of radioactive material attended a conference organised by ONR's Transport Competent Authority (TCA) team. The event provided a good opportunity for the TCA team to share their expectations on compliance with regulations governing the transport of radioactive material.

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

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