

Office for Nuclear Regulation (ONR)

Site Report for Dungeness B

Report for period 1 October to 31 December 2021

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 for the Dungeness B and are also available on the ONR website (<http://www.onr.org.uk/lrc/>).

Site inspectors from ONR usually attend Dungeness B 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.

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1. Inspections

1.1. Dates of Inspection

The ONR site inspector undertook inspections on the following dates during this reporting period of 1 October to 31 December 2021:

- 18 – 21 October 2021
- 2 - 4 November 2021
- 8 - 11 November 2021

Visits made by specialist inspectors

- 18 – 21 October 2021
- 2 - 4 November 2021

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 2017 (IRR17) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring 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

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

- Licence Condition (LC) 4- Restrictions on nuclear matter on the site,
- LC 5 - Consignment of nuclear matter
- LC 25 - Operational records.
- LC 32 - Accumulation of Radioactive Waste Compliance Inspection
- LC 7 – Incidents on the site compliance inspection

Compliance inspections

LC 7 – Incidents on the site - (18-21 October 2021)

The purpose of LC 7 is to ensure that the licensee implements adequate arrangements for the proper application of resources, identify immediate corrective actions, identify any operability / reportability concerns to ONR, and identify potential adverse trends and/or repeat occurrences reporting of incidents at station and undertaking adequate investigations to determine root causes.

This inspection was undertaken by the nominated site inspector and observed by a French (ASN) regulator as part of their secondment activities. The inspection targeted the station's LC 7 arrangements relevant to reported incidents, the inspection sampled the following areas

- Apparent Cause Investigation
- Human Evaluation Tool (HUET) investigations
- Effectives reviews (ER)
- Observing a CAP sentencing meeting

In conclusion, the station effectively demonstrated its compliance arrangements against LC 7. Some minor observations were made during the inspection which the site inspector is confident the station will address. The site inspector rated this compliance inspection as GREEN, no further regulatory follow-up required.

LC 32- Accumulation of radioactive waste – (2-4 November 2021)

This inspection focused on the status of radioactive waste management at Dungeness B following the successful closure of a Regulatory Issue in November 2019. ONR sampled the implementation of the station's arrangements for minimising accumulations of radioactive waste generated on the site and for recording the waste so accumulated. Overall, ONR found that the radioactive waste is being managed in accordance with regulatory expectations and the station is delivering against its radioactive waste management plan. The station recognised the importance of maintaining its current performance and the environmental safety group is planning to reinvigorate engagement with operational teams to reinforce good radioactive waste management behaviours and practice.

There remain areas where the arrangements could be strengthened to support and cultivate a waste led culture, which will help to maintain compliance with LC 32. This is particularly important now that the station has stopped generating.

From the evidence sampled, ONR concluded that implementation of the duty holder's arrangements for minimising the accumulation of radioactive waste on the station, and for recording the waste so accumulated, to be adequate, the inspection was therefore rated GREEN.

Joint inspection with ONR Safeguards LC4- Restrictions on nuclear matter on the site, LC5 - Consignment of nuclear matter and LC25 - Operational records. (8-11 November 2021)

The inspection was led by the Dungeness B nominated site inspector and supported by the site improvement inspector. The purpose of the LC 4, 5 and 25 compliance inspections were to ensure that the licensee implements adequate arrangements with respect to the life cycle for a fuel element.

This inspection was also a joint inspection with ONR's Safeguards team as there were several areas which both inspection teams shared a common interest. The Safeguards inspection focused on the station's compliance arrangements against Nuclear Safeguards (EU Exit) Regulations (NSR19).

The compliance inspection targeted the station's LC4, 5 and 25 arrangements relevant for the management of nuclear fuel at site, the inspection sampled the life cycle of a single fuel element considering the following areas:

- Initial arrival at the station,
- Plant visit to the fuel storage facility
- Fuel element reactor core location
- Removal of fuel element
- Returned to Sellafield for disposal/storage
- All associated documentation to the sampled fuel element
- Records Management and inspection of station archive centre
- Staff Training records of responsible persons

For the LC4, 5 and 25 compliance inspections, ONR 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 site inspector was satisfied that the licensee's arrangements and their implementation in compliance with LC4, 5 and 25 were suitable and sufficient. No formal actions were considered necessary, the compliance inspection was rated green for each licence condition examined.

System Based Inspections

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:

- LC 10: Training
- LC 23: Operating rules
- LC 24: Operating instructions
- LC 27: Safety mechanisms
- LC 28: Examination, inspection, maintenance and testing
- LC 34: Leakage and escape of radioactive material and radioactive waste

For this reporting period only one SBI was undertaken.

System Based Inspection (SBI) covering Data Processing & Control System (DPCS) and a Joint Nuclear Safety & Nuclear Security SBI - 18-21 October 2021

This inspection was led by two control and instrumentation (C&I) specialist inspectors and supported by a fault studies specialist inspector. In addition to this SBI, two cyber security and information assurance inspectors undertook a Systems based inspection of the site data processing and control system (DPCS)

The function of DPCS is to provide prompts for operator action (i.e. protection) in conjunction with separate hard wired alarms and indications; and to ensure that in normal operation the plant remains within the operating envelope of the reactor. Through examination of the system, a compliance inspection was performed against the following Licence Conditions (LCs) which are applicable provisions of the Energy Act 2013. Note: LC 34 (Leakage and escape of radioactive material and radioactive waste) which is usually considered during a SBI was not considered applicable to this intervention)

The security aspect of this intervention was conducted under the requirements of the Nuclear Industries Security Regulations (NISR) 2003 and considered if the requirements of the Security Case and Security Operating Procedures had been met, to confirm the application of physical, administrative, procedural and technical security controls specific to the Data Processing and Control System.

With respect to the SBI, ONR judged that overall, the safety provisions applicable to the DPCS met the requirements of the safety case in relation to LCs 10, 23, 24, 27, and 28. However, ONR did not consider that the DPCS met the requirements of the security case. ONR judged that compliance with NISR 2003 and EDF's arrangements in the Nuclear Site Security Plan was not demonstrated in relation to the DPCS. A regulatory issue has been placed upon the duty holder for it to address the shortfalls identified.

Members of the public, who would like further information on ONR's inspection activities during the reporting period, can view site Intervention Reports at www.onr.org.uk/intervention-records on our website www.onr.org.uk. Should you have any queries regarding our inspection activities, please email contact@onr.gov.uk.

Other Work

Annual Review of Safety (ARoS) – (2-4 November 2021)

A team of ONR inspectors attended the Dungeness B Annual Review of Safety for the period April 2020 to March 2021. The review summarised the site's strengths and identified opportunities for improvement. The ARoS was conducted over two half days. The first half day consisted of a plant walk down of the station, followed by a review meeting:

External plant

- Backup Boiler feed water Pump House
- Essential Cooling water System
- Chemical Dosing plant

Internal Plant

- Reactor basement (Pressure Vessel cooling system)
- Plug Unit Maintenance Facility (PUMF)
- Gas Circulator Hall
- Pond's area (C2)

ONR provided feedback to the station regarding the areas visited. The ONR team observed good housekeeping in many areas although there were some areas where there had been some drift in standards. Overall, the plant visit was very informative and demonstrated the station's continual drive to improving standards, behaviours, and expectations.

Safety Representatives Meeting

The site inspector held routine meetings with station safety representatives, to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work. During this reporting period no significant safety issues were raised. The safety representatives provided examples of several positive observations regarding the Operational Focus meeting improvements, Take-5, COVID-19 management and significant progress with the Station's HESAC. However, there are some concerns regarding the deterioration of some buildings, welfare facility issues concerning water supplies and the loss of skills and knowledge management through people leaving.

Intelligence gathering

During this reporting period the site inspector undertook plant visits with several senior leadership team managers. The aim of this was to understand those areas which the station managers had personal interest in or that were a key focus at the time of the site inspector's visit. The site inspector also observed the weekly site excellence tours which are routine station tours undertaken by a mixture of EDF and contract partner personnel which target specific areas of the station to maintain or improve standards at the station. Attending the site excellence tour also enables the site inspector to meet and discuss topical issues with a greater variety of station staff and gain further insights into the station. The site inspector also undertook routine engagement meetings with the station's internal regulator to share intelligence and discuss areas of mutual interest and future inspection planning.

Post generation

ONR continues to engage with the licensee and central technical organisation to understand the work scope for the post generation phase and to develop the regulatory strategy for maintaining adequate oversight of the defuelling preparations and for permissioning the defuelling safety cases.

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.

There were no such matters or events of significance during the period.

Dungeness B is a site in ONR enhanced attention, and we have written before of extensive work with the station over the past two years to encourage and help efforts to improve performance. From the outset, we agreed a set of success criteria including leadership and culture, condition of plant and safety case. We now regard many of these success criteria to have been met, and are planning a safety culture intervention in February 2022 to gather evidence on the rest.

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 take a range of enforcement actions, to include issuing an Enforcement Notice.

- No LIs, Enforcement Notices or Enforcement letters were issued during this period.

5. News from ONR

For the latest news and information from the Office for Nuclear Regulation, please read and subscribe to our regular email newsletter 'ONR News' at www.onr.org.uk/onrnews

6. Contacts

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