



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

Report for period 1 July to 30 September 2017

## 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 quarterly to members for the Dungeness Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/llic/>).

Site inspectors from ONR usually attend Dungeness Site Stakeholder Group meetings 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 made inspections, supported where appropriate by specialist inspectors, on the following dates during the quarter:

- 17-20 July
- 14-16 August
- 5-7 September

To support ONR's consent to start operations following reactor 21 statutory outage, ONR's specialist inspectors undertook a number of inspections on the following dates:

- 3-4 July
- 11-12 July
- 18-20 July
- 1-2 August
- 8-9 August

## 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 1999 (IRR99) 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.

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

- examination, maintenance, inspection and testing;
- management of operations including control and supervision;
- control of modification;
- periodic shutdown / outage;
- quality management;
- radioactive waste management;
- radiological protection;
- staff training, qualifications and experience;
- organisational capability; and,
- conventional health and safety.

In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. However, where improvements

were considered necessary, the licensee made satisfactory commitments to address the issues, and the site inspector will monitor progress during future visits. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

ONR carries out unannounced inspections occasionally across most of the nuclear licensed sites that it regulates. Within this period ONR conducted an unannounced inspection at DNB during silent hours, this focussed on the site's return to service procedures following statutory outage and shift handover activities. The operating records supporting the pressure vessel commissioning were sampled and found to be complete and readily available. ONR found good use of three way communications and a clear nuclear safety focus was evident during the shift handovers and start of shift briefs. No significant shortfalls were identified with the adherence to start up procedures and shift handovers, no regulatory action was required.

## 2.2 Other work

### Periodic Shutdown of Reactor 21

The periodic shutdown of nuclear reactors operated by EDF-NGL is a requirement of Licence Condition 30. At Dungeness B, statutory outages are undertaken at three year intervals in accordance with the reactor's approved maintenance schedule. On the 16<sup>th</sup> June 2017, Dungeness B reactor 21 was shut down to undertake its statutory outage maintenance and inspection activities.

During the statutory outage a number of ONR specialist inspectors carried out a series of inspections to inform ONR's decision on whether to grant consent for reactor 21 to re-start following the statutory outage. On the 16<sup>th</sup> August 2017 the ONR superintending inspector for the operating reactors' programme, accompanied by the Dungeness B nominated site inspector and outage project inspector, attended a meeting with the station to discuss the progress with the statutory outage of the Dungeness B Reactor Unit 21.

The regulatory interventions carried out by ONR did not identify any issues of safety significance in relation to the licensee's safety case to justify the start-up of Reactor 21 and its operation until the next periodic shutdown. A single action requiring resolution before the granting of ONR's consent was raised related to the welds on the gas bypass filter vessel debris pot. This action was subsequently resolved, with evidence being submitted by the licensee to demonstrate the acceptable condition of the welds. A further commitment was agreed with the station to identify alternative options that could be implemented to allow improved access for inspections.

The station confirmed that all maintenance schedule requirements for reactor 21 periodic shut down and the planned modification work for the outage had been completed. Based upon evidence gathered from both ONR's own inspections and the safety justifications presented by the station, ONR issued Licence Instrument 554 against LC30(3) under Nuclear Site Licence 61 giving ONR's consent to start-up Dungeness B Reactor Unit 21 following its 2017 periodic shutdown. This request was implemented on 6<sup>th</sup> September 2017.

### Conventional Safety Inspections

Conventional health and safety inspectors conducted an intervention at Dungeness B on control of asbestos and management of Liquefied Petroleum Gas (LPG) installation. The inspection team observed a number of examples of good standards during the visit in addition to a number of areas for improvement. It was evident that Dungeness B industrial safety personnel had put a significant amount of effort into managing conventional health and safety hazards present as a result of the various outage activities underway. Notwithstanding this effort, a number of regulatory actions were identified during the inspection which will be

followed up by ONR. Two regulatory issues have been raised in relation to the site wide asbestos management arrangements and LPG installation. ONR has written to the station seeking timely resolution of these shortfalls.

### **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.

Matters and events of particular note during the period were:

On Saturday 8 July, when both reactors were shut down, during testing of Gas Circulator (GC) 27, the GC27 main motor tripped. When an attempt was made to restart the motor, it resulted in a station transformer tripping and loss of supply to a station switchboard. Following the station switchboard trip, an attempt to interconnect between the affected station switchboard and another station transformer, in order to restore electrical supply to it, was made. This resulted in the interconnected station switch board tripping and a subsequent partial loss of electrical power to the station. Only one other station switch board remained energised.

As a consequence of the loss of station supplies, an Operational Alert was entered to assist operations, thereby focusing station resource on ensuring key safety parameters, including Criticality, Cooling and Containment, remained effective and intact. The station also entered an immediate Technical Specification action condition due to the loss of all GC main motors as a consequence of losing the station board and unavailability of the 11kV unit boards. The immediate action taken by the station restored the majority of supplies to site through the interconnection of a station transformer to the affected station switch boards. This was achieved within the safety case action conditions. The procedures for restarting GCs and loading of switchboards were reviewed to prevent recurrence.

This event was reviewed by an ONR electrical specialist inspector and he was satisfied that the supplies to the transformers had been appropriately reinstated in a timely manner in accordance with the safety case and licensee's arrangements; and that there was no significant impact on nuclear safety.

During start-up operations following the statutory outage, the station has notified ONR of a number of events in accordance with the licensee's LC7 notification process. The ONR site inspector has engaged with the station regarding each event and confirmed that the safety case limits and conditions have been maintained and that the appropriate level of corrective action has been taken in all cases. In particular, two of the events resulted in reactor trip, one manually and one automated. In both instances the reactor was shut down safely and the station has completed a preliminary investigation and rectified the issues prior to considering re-start. ONR will follow-up on the learning from these event investigations as part of routine regulatory business.

### **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 issue Enforcement Notices to secure improvements to safety.

On the 6<sup>th</sup> September 2017, ONR issued LI agreement number 554 against LC30(3) under Nuclear Site Licence 61, giving ONR's consent to start-up Dungeness B Reactor Unit 21 following its 2017 periodic shutdown.

No Enforcement Notices were issued during the period.

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

## **5 NEWS FROM ONR**

ONR Chief Nuclear Inspector, Dr Richard Savage, has announced he will be stepping down after two years in the role for family reasons. ONR has appointed Mark Foy, current Director of our Operating Facilities, as Acting Chief Nuclear Inspector (CNI) with effect from 30 October. ONR expects to appoint a permanent Chief Nuclear Inspector towards the end of 2017, subject to ministerial approval.

ONR will soon launch its new newsletter containing the latest news and developments from across the organisation. If you would like to receive this, please subscribe on the [ONR website](#).

## 6 CONTACTS

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