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| ONR Project assessment report  Dungeness B – Approval of site emergency plan revision 018 |



ONR Project assessment report

**Project name**: Dungeness B

**Report title**: Approval of site emergency plan revision 018

**Dutyholder/Applicant**: EDF Energy Nuclear Generation Limited

**Authored by**:

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# Executive summary

**Title**

Dungeness B – approval of site emergency plan revision 018

**Permission requested**

EDF Energy Nuclear Generation Limited (the licensee) has requested our approval of an amendment to the site emergency plan for Dungeness B nuclear power station.

**Background**

Following the end of power generation, the licensee has started to remove fuel from the shutdown reactors and has reviewed the radioactive risk associated with these activities. The licensee’s assessment identifies a reduction in the minimum technical distance for the off-site urgent protective action to shelter. Based on advice from the United Kingdom Health Security Agency, the local authority has redetermined the detailed emergency planning zone for Dungeness B.

The emergency plan contains a copy of the detailed emergency planning zone for reference purposes and as a result, the licensee has amended the plan. The important change comprise of:

* application of the generic defueling emergency plan template;
* moving the detailed emergency planning zone map from the emergency plan into emergency handbook; and
* minor administrative changes and updates.

**Assessment and inspection work carried out by ONR in consideration of this request**

Based on the reduction in risk, we judged it proportionate to limit our assessment to:

* confirming that the emergency plan is consistent with the generic emergency plan for a defueling station; and
* confirming that the detailed emergency planning zone is contained in emergency handbook and is consistent with that determined by the local authority.

**Matters arising from ONR's work**

There are no outstanding matters arising from our assessment and inspection activities.

**Conclusions**

Based on our assessment of the evidence sampled, we are satisfied that:

* the Dungeness B emergency plan is consistent with the generic emergency plan for a defueling station;
* the detailed emergency planning zone in emergency handbook is consistent with the area determined by the local authority; and
* moving the detailed emergency planning zone map from the emergency plan into the emergency handbook will not adversely affect the licensee’s capability to respond to an accident or emergency.

**Recommendation**

We should issue licence instrument 569 under LC 11(3) for nuclear site licence 61 to approve the Dungeness B site emergency plan.

Table 1: List of abbreviations.

|  |  |
| --- | --- |
| Term/Acronym | Description |
| DEPZ | Detailed Emergency Planning Zone |
| DNB | Dungeness B |
| LC | Licence Condition |
| ONR | Office for Nuclear Regulation |
| REPPIR19 | Radiation (Emergency Preparedness and Public Information) Regulations 2019 |

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# Permission requested

1. EDF Energy Nuclear Generation Limited (the licensee) has requested [1] our approval of an amendment to the site emergency plan [2] for Dungeness B (DNB) nuclear power station.

# Background

1. The DNB site emergency plan is an approved document under LC 11(2), meaning that the licensee cannot alter or amend it without our approval under LC 11(3).
2. Revision 017 of the plan was implemented in January 2021 and reflected the change in the potential consequences of an accident or emergency at DNB associated with the end of power generation.
3. The licensee has now started the process of defueling the shutdown reactors, which meets the criteria of a ‘material change’ in the work with ionising radiation under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR19).
4. In accordance with REPPIR19, the licensee has revised the hazard evaluation and consequence report for DNB. Their assessment identifies a reduction in hazard, but shows that there is still the potential for a radiation emergency to occur and that both an operator’s emergency plan (Regulation 10) and a local authority’s emergency plan (Regulation 11) are still required.
5. Based on the licensee’s assessment of the minimum technical distance for off-site urgent protective action and advice from the United Kingdom Health Security Agency, the local authority (Kent County Council) has redetermined the off-site detailed emergency planning zone (DEPZ) for DNB.
6. The emergency plan contains a copy of the DEPZ for reference purposes and as a result, the licensee has amended the plan. The important changes to the plan comprise of:

* application of the generic defueling emergency plan template;
* transfer of the DEPZ map from the emergency plan to the emergency handbook; and
* minor administrative changes and updates.

# Assessment and inspection work carried out by ONR in consideration of this request

1. In accordance with the regulatory permissioning plan (PR-02029), consideration of the licensee’s request to approve the DNB emergency plan has been limited to:

* confirming that the DNB emergency plan is consistent with the generic emergency plan for a defueling station; and
* confirming that the detailed emergency planning zone is contained in DNB's emergency handbook and is consistent with that determined by the local authority.

1. DNB’s emergency response arrangements are collectively defined in the site emergency plan and the site emergency handbook. The emergency plan describes the basic principles of the arrangements for dealing with any accident or emergency arising on the site and the handbook details the procedures, equipment and personnel necessary to implement the emergency response.
2. The licensee uses a generic model to produce the emergency plans and handbooks for the fleet of reactors. We examined the generic emergency plan for a defueling site when if was first introduced and were satisfied that the changes from an operating reactor were appropriate. We are content that the revised plan for DNB is consistent with the generic plan for a defueling site and contains the appropriate level of information.
3. Typically, the licensee’s emergency plan has contained a copy of the DEPZ, a defined zone around the site determined by the local authority, where it is proportionate to pre-define protective actions which would be implemented without delay (e.g. within a few hours) to mitigate the most likely consequences of a radiation emergency.
4. As stations stop generating and begin defueling and decommissioning activities, changes to the DEPZ become more frequent than for generating stations, as the off-site risk incrementally reduces. In order to reduce the administrative burden associated with making changes to the approved arrangements, the licensee has proposed removing the DEPZ map from the emergency plan and incorporating it into the emergency handbook.
5. We are content that moving the detailed emergency planning zone map from the emergency plan into the emergency handbook will not adversely affect the licensee’s capability to respond to an accident or emergency at DNB, and will continue to meet the expectations of REPPIR 19.
6. The licensee has provided evidence [3] to demonstrate that the revised DEPZ has been included in to section 8 of the emergency handbook, which covers notifications, warnings and protective actions. We have confirmed that the geographical area of the DEPZ in the licensee’s arrangements is consistent with the DEPZ determined by the local authority.

## Civil nuclear security

1. Our security inspector for DNB was consulted on the proposed changes to the DNB emergency plan and they confirmed [4] that they had no objections.

## Engagement with other governmental agencies

1. We consulted the Environment Agency on the proposed changes to the DNB emergency plan and they confirmed [5] that they had no objections.

# Matters arising from ONR’s work

1. There are no outstanding matters arising from our assessment and inspection activities.

# Conclusions

1. Based on our assessment of the evidence sampled, we are satisfied that:

* the DNB emergency plan is consistent with the generic emergency plan for a defueling station;
* the detailed emergency planning zone in DNB's emergency handbook is consistent with the area determined by the local authority; and
* moving the detailed emergency planning zone map from the emergency plan into the emergency handbook will not adversely affect the licensee’s capability to respond to an accident or emergency at DNB.

# Recommendations

1. We should issue licence instrument 569 under LC 11(3) for nuclear site licence 61 to approve the DNB site emergency plan.

# References

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| [1] | *DNB request for approval of site emergency plan NSLDNB50130R 29 January 2025 ONRW-2019369590-17045.* |
| [2] | *DNB/EMPREMP/001 Dungeness B Nuclear Power Station Defueling Emergency Plan, ONRW-2019369590-17046.* |
| [3] | *DNB/EMPREP/002/008 DNB Emergency Handbook Section 8, ONRW-2019369590-17832.* |
| [4] | *ONR security inspectors notice of no objection to approval of Dungeness B Emergency Plan - email dated 06 February 2025 ONRW-2019369590-17585.* |
| [5] | *Environment Agency - notice of no objection to approval of Dungeness B Emergency Plan - email dated 18 February 2025 ONRW-2019369590-17584.* |