



Dungeness B Reactor R21 Periodic Shutdown 2020

ONR Agreement to an Extension of Dungeness B R21 Operating Period

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EXECUTIVE SUMMARY

ONR Agreement to an Extension of Dungeness B R21 Operating Period

This Project Assessment Report describes the assessment of the safety justification in Engineering Change (EC) 367095 and records the regulatory views and judgements made in consideration of the request. It contains my recommendations to the Operating Facilities Division regarding the permissioning of this modification.

Permission Requested

EDF Energy Nuclear Generation Limited (NGL), the licensee for the Dungeness B nuclear licenced site has requested ONR 'Agreement' under Licence Condition 30(2) to an extension of the Reactor 21 operating period by 390 days up to 30 September 2021.

Background

Nuclear site licence condition (LC) 30 requires the Licensee to periodically shutdown plant in accordance with the requirements of its plant maintenance schedule (PMS) for the purpose of enabling any examination, inspection, maintenance or testing of any plant or process to take place. The preface to the Dungeness B PMS specifies the plant shall be shutdown 3 years after ONR's consent to start-up. ONR has approved this preface under LC28 (4).

ONR's last consent to start up R21 was issued on 06 September 2017 so LC 30(1) requires the plant to be shut down on 06 September 2020 in accordance with three-year interval specified in the PMS preface. After starting up on 06 September 2017 the reactor was shut down on 23 September 2018 due to a Double Reactor Outage (DRO) to remediate corrosion issues found on the plant and has not operated since. This means that when considering shorter off-load periods the mean accumulated time at power since the last statutory outage is ~13 months. In accordance LC 30(2) the licensee has requested ONR's agreement to extend the plant operating period by 390 days up to 30 September 2021.

The resources available to the NGL fleet outage programme has been constrained by restrictions imposed by the COVID-19 pandemic. This extension to the R21 operating period contributes to rationalising the overall fleet outage programme to allow the effective management of station resources and optimum availability of outage personnel and spares at each site.

The licensee considers the proposed extension to the operating period does not affect nuclear safety and it is judged by NGL that there are no changes to Nuclear Safety Principles.

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

The licensee proposed a significant extension to the R21 operating period so ONR has carried out a programme of work to judge the adequacy of the claims, arguments and evidence presented in the safety documentation. Specialist inspectors have carried out assessments in the following disciplines: Civil, Mechanical, Electrical, Structural Integrity, Graphite Integrity, Control and Instrumentation and Probabilistic Safety Assessment to support my permissioning decision.

Matters arising from ONR's work

The assessments concluded the claims arguments and evidence presented in EC 367095 were adequate and support the licensee's claim that "nuclear safety systems will not incur any significant decrease in their reliability or functionality, and there will be no significant increase in risk as a result of the deferral of the statutory outage. I consider the ALARP arguments are appropriate showing negligible safety benefit in completing the outage in September 2020 and articulating clear safety benefits in deferring the outage in terms of better planning, greater scope, reduced timescales and less opportunity for the transmission of the COVID 19 virus.

Conclusions

I am satisfied with the claims, arguments and evidence laid down within EC 367095. ONR's assessments concluded the extension of the R21 operating period to 30 September 2021 would have no, or negligible, impact on nuclear safety and raised no objections to a recommendation to 'agree' to the extension to the R21 operating period.

Recommendation

I recommend that, in accordance with LC 30(2) ONR should issue licence instrument 563 to Dungeness B Nuclear Licensed Site 'agreeing' to an extension of the Reactor 21 operating period to no later than 30 September 2021.

LIST OF ABBREVIATIONS

ALARP	As low as reasonably practicable
BSL	Basic Safety level (in SAPs)
BSO	Basic Safety Objective (in SAPs)
CES	Central Engineering Support
CTO	Central Technical Organisation
DRO	Double Reactor Outage
EC	Engineering Change
GC	Gas Circulator
HOW2	(Office for Nuclear Regulation) Business Management System
IAEA	The International Atomic Energy Agency
IJCO	Interim Justification for Continued Operations
JCO	Justification for Continued Operations
NGL	Nuclear Generation Limited
OEM	Original Equipment Manufacturer
ONR	Office for Nuclear Regulation
PSA	Probabilistic Safety Analysis
PSCP	Pre-stressed Concrete Pressure Vessel
PSR	Periodic Safety Review
PSSR	Pressure Systems Safety Regulations
PMS	Plant Maintenance Schedule (LC28)
PVCW	Pressure Vessel Cooling Water
RTS	Return to Service
R21	Reactor 21
SAP	Safety Assessment Principle(s)
SQEP	Suitably Qualified and Experienced Person
TAG	Technical Assessment Guide (ONR)

TABLE OF CONTENTS

1	PERMISSION REQUESTED	7
2	BACKGROUND	7
3	ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST	8
4	CONCLUSIONS	15
5	RECOMMENDATIONS.....	15
6	REFERENCES	16

1 PERMISSION REQUESTED

1. EDF Energy Nuclear Generation Limited (NGL), the licensee for the Dungeness B nuclear licenced site has requested ONR 'Agreement' under Licence Condition 30(2) to an extension of the R21 operating period by 390 days up to 30 September 2021. [Ref 6]
2. This Project Assessment Report describes ONR's assessment of the safety justification in Engineering Change (EC) 367095 [Ref 6] and records the regulatory views and judgements made in consideration of the request. It also contains my recommendations to the Operating Facilities Division.

2 BACKGROUND

3. Nuclear site licence condition (LC) 30 requires the Licensee to periodically shutdown plant in accordance with the requirements of its plant maintenance schedule (PMS) for the purpose of enabling any examination, inspection, maintenance or testing of any plant or process to take place. The preface to the Dungeness B PMS specifies the plant shall be shutdown 3 years after ONR's consent to start-up. ONR has approved the preface under LC28 (4).
4. The examination, inspection, maintenance or testing requirements for all plant which may affect safety are specified in the PMS which is derived from the safety case required by LC23, other regulatory requirements, such as Pressure System Safety Regulations (PSSR), and requirements from equipment manufacturers.
5. ONR's last consent to start up R21 was issued on 06 September 2017 [Licence Instrument (LI) 554, CM9 2017/339099] so LC 30(1) requires the plant to be shutdown on 06 September 2020 in accordance with three-year interval specified in the PMS preface. R21 started up on 06 September 2017 but was shutdown on 23 September 2018 due to a Double Reactor Outage (DRO) to address corrosion issues found on both reactors and remains shutdown. Taking into account shorter off-load periods, mean accumulated time at power since the last statutory outage is ~13 months.
6. In accordance LC 30(2) the licensee has requested ONR's agreement to extend the plant operating period by 390 days up to 30 September 2021 and submitted EC 367095 to demonstrate the safety of deferring maintenance on plant which may affect safety for this period.
7. Since March 2020 the UK has been dealing with the consequences of the global COVID-19 pandemic which has resulted in government guidance and legislation to socially distance people and restrict their movement. NGL has prepared and implemented its pandemic response plan but inevitably there has been a disruption to the company outage schedule. It has therefore proposed to defer the Dungeness outage until 30 September 2021 allowing the effective management of station resources and optimum availability of outage personnel and spares to complete the required maintenance.
8. NGL consider that the proposed change does not affect nuclear safety and it is judged by NGL that there are no changes to Nuclear Safety Principles.
9. The safety justification was presented at category 2 which therefore required a formal independent nuclear safety assessment (INSA). The EC underwent an independent nuclear safety assessment by NGL's internal nuclear regulator who supported the proposal and issued an INSA Certificate [Ref 6].

3 ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST

10. This assessment and approval has been carried out in accordance with ONR Guidance [Ref 1 & 2]. Individual assessments used the guidance in the relevant technical assessment guides [Ref 3] and IAEA guidance [Ref 4].
11. NGL's safety justification for extending the R21 operating period to 30 September 2021 is based on the claim that "nuclear safety systems will not incur any significant decrease in their reliability or functionality, and there will be no significant increase in the risk of an initiating event as a result of the deferral of the statutory outage" This is supported in the EC by the following arguments:
 - The potential impact of the deferral on degradation mechanisms related to physical parameters such as temperature, irradiation, pressure etc. remains within the safety case assumptions for a 3-year operating period.
 - There are no commitments from previous Return to Service (RTS) ECs which will be affected by the deferral.
 - Safety case commitments and caveats made to support safety case claims, including justifications for continued operations (JCOs), and interim justifications for continued operations (IJCOs), will not be affected by the proposal.
 - The potential impact of the deferral has been considered by appropriate suitably qualified and experienced persons (SQEPs) who have confirmed that there are no time dependent issues that would reduce plant reliability or increase nuclear safety risk and therefore prevent a deferral of the outage.
 - The reliability of nuclear safety related plant and equipment is not significantly reduced by the extended off-load period.
 - There are no outstanding periodic safety review (PSR) related items that will be affected by the deferral.
 - There are no activities associated with the Environmental Maintenance Schedule that cannot be deferred.
 - The increase in risk of common cause failure is small.
 - The risk presented by the deferral is As Low As Reasonably Practicable (ALARP) as it will realign the plant back with the statutory outage programme plan and will allow sufficient time for outage planning and the nuclear safety benefits from retaining a planned statutory outage in July 2020 are small. The cost, time, effort and disruption involved in retaining the planned statutory outage is grossly disproportionate to any risk averted.
12. NGL considered the following prescriptive documents which specify the inspection and maintenance activities which are required to be undertaken during an outage:
 - Plant Maintenance Schedule (PMS);
 - Component Life Assessment (CLA);
 - Specific commitments made in previous return to service ECs;
 - Commitments from Periodic Safety Reviews (PSRs);
 - Planned modifications in support of safety cases;
 - Safety case commitments and caveats including Engineering Changes (ECs)
 - Justifications for Continued Operation (JCOs) and Interim Justifications for Continued Operation (IJCOs);

- Written Schemes of Examination (WSE) for Pressure Systems Safety Regulations (PSSR);
 - Environmental Maintenance, Inspection and Testing Schedule (EMITS).
13. ONR has carried out a programme of work to judge the adequacy of the claims, arguments and evidence presented in EC 367095. Specialist inspectors sampled the licensee's safety documentation and have carried out assessments in the disciplines listed below. The samples taken, the inspectors' findings and recommendations are described in the specialists assessment reports which support my permissioning decision:
- Civil Engineering [Ref 7]
 - Structural Integrity [Ref 8]
 - Graphite Integrity [Ref 9]
 - Mechanical Engineering [Ref 10]
 - Electrical Engineering [Ref 11]
 - Control and Instrumentation [Ref 12]
 - PSA [Ref 13]
14. A summary of these assessment reports and the recommendations are shown in the sections 3.1 to 3.8 below. Actions show how recommendations were addressed

3.1 CIVIL ENGINEERING ASSESSMENT REPORT

15. The Civil Engineering specialist is of the opinion that in terms of the civil engineering aspects related to the proposal there would not be a significant increase in overall Station nuclear safety risk from this proposal. The assessment supports ONR's agreement to a deferral of the statutory outage of Dungeness B Reactor 21 to 30 September 2021. [Ref 7]
16. Two further recommendations were made:
17. **Civil Engineering Recommendation 1:** EC 351273 (Continued Operation Following High Moisture Levels Found on R21 B5 Superheater Outlet Penetration) was updated to Revision 001 in 2017 to justify a return to power and continued operation to 2020 with increased relative humidity monitoring of the B5 Super-heater penetration. As this EC does not cover operation to the end of the deferral period, the specialist inspector recommended that the EC is reviewed by NGL. Subsequently the specialist has confirmed EC 351273 (Version 02) was received 24 September 2020 extending the validity of the JCO to end June 2021.
To close this recommendation NGL has confirmed that a further revision to EC 351273 is awaiting a period of at-power operation in order drive out any remaining moisture in the header and to underwrite the claim that the leak has ceased. The assessment report notes the evidence presented by the appointed examiner (APEX) indicates that degradation of the pre-stressed concrete pressure vessel (PCPV) due to pressure vessel cooling water (PVCW) leakage is very small and will not challenge the nuclear safety of the PCPV.
As a time limited safety case this is monitored by station design engineering and there is a task in the DA business plan to deliver the case next year. [see Ref 14]
18. **Civil Engineering Recommendation 2:** EC 365625 Version 2 (Steam Penetration Secondary Restraints and Leak Limiters - Availability Assessment and Maintenance Schedule Update) was prepared to propose an appropriate future surveillance interval and the test method to be used in lieu of the instrumented Leibig anchors and contains a commitment to "review and confirm optimal anchor load check sample size and incorporate revised surveillance requirements into Schedule 3 of the PMS if deemed

necessary. As the Leibig anchor loads are monitored at outages the civil engineering inspector recommended that the APEX should finalise the revised surveillance regime for the Liebig anchors ahead of the next Statutory Outage.

This recommendation has been communicated to Dungeness B who confirmed action request 1150025/01 is in place to ensure the basis of the proposed monitoring regime is revisited prior to the next outage and that the Maintenance Schedule (Section 3) has already been updated to specify the requirements in lieu of load cell measurements.

[Ref 14]

3.2 STRUCTURAL INTEGRITY

19. The Structural Integrity specialist concluded that he was satisfied that the claims, arguments and evidence laid down within the licensee's safety case support deferral of the periodic shutdown, from a structural integrity perspective, until 30 September 2021 [Ref 8]. This conclusion is based upon meeting the conditions identified within the recommendations below.
20. **Structural Integrity Recommendation 1.** The ONR project inspector should take into consideration the findings of this structural integrity assessment when considering agreement to the proposal to defer the R21 periodic shutdown until September 2021.
21. **Structural Integrity Recommendation 2.** Acceptance of the deferral of the R21 periodic shutdown until September 2021 should be conditional on ONR approval of boiler safety case, EC 366381.
ONR is permissioning the implementation EC 362606 [NP/SC 7783 - Interim Boiler Tube Failure Safety Case to Address the Effects of Reactor Internal Flooding]. EC 366381 [Optimisation of Boiler Operation to Alleviate Assessed Boiler Tube Failure Risk from 9%Cr Oxidation] is a reference to this case and is encompassed by the assessment, PAR and licence instrument. This gives ONR appropriate regulatory control over EC 366381 allowing the LI 'agreement' for the extension to the operating period to be issued independently. The recommendation is closed out.
22. **Structural Integrity Recommendation 3.** Acceptance of the deferral of the R21 periodic shutdown until September 2021 should be conditional on confirmation there are no issues that could prevent safe deferral of the periodic shutdown and ONR not objecting to the revised safety case for pipework in the Gas Bypass Plant.
ONR has identified its return to service issues on the database and is actively engaging with Dungeness B to ensure they are resolved appropriately before reactor start up. ONR will review the EC367667 relating to the gas by-pass plant and record the outcome in a decision record. This provides regulatory control allowing the LI 'agreement' for the extension to the operating period to be issued. The recommendation is closed out.
23. **Structural Integrity Recommendation 4.** NGL shall provide evidence of satisfactory completion or postponement of PSSR inspections before ONR acceptance of the deferral of the R21 periodic shutdown until September 2021.
NGL has engaged with ONR technical specialists and advised ONR of the postponement of examinations in accordance with the PSSR. See section 3.9 below. The recommendation is closed out.
24. **Structural Integrity Recommendation 5.** Approval of the deferral, until September 2021, of the R21 periodic shutdown should be conditional on ONR acceptance of the corrosion event recovery case.
ONR is engaging with Dungeness B regarding its response to the corrosion event and is assessing EC364380 which details the Station's response. This will be considered in the decision record for return to service of both reactors. The recommendation is closed out.

3.3 GRAPHITE INTEGRITY ASSESSMENT REPORT

25. An ONR specialist carried out an assessment of the graphite integrity aspects of the claims, arguments and evidence presented in EC 367095 and has produced an assessment report [Ref 9]. The specialist made two recommendations shown below.
26. **Graphite Integrity Recommendation 1:** Revision 2 of the current core restraint safety case (EC 362709) is currently time limited to 30th September 2020. Revision 3 is currently in verification, which will extend this to 30 September 2021. The project inspector should ensure that this EC is provided to ONR and has been through NGL's acceptance process as part of his PAR.
NGL has confirmed that EC 362709 has been subjected to a minor date extension whilst the plant is shutdown and for the at-power state, a Cat 2 revision has been deemed necessary and as such is now being tracked alongside all other return to service (RTS) ECs. [Ref 14]. ONR's Graphite Specialist inspector confirmed that NGL has provided a verified draft of the latest version of the for information and this closes out the recommendation (see 2020/312220).
27. **Graphite Integrity Recommendation 2:** Based on the assessment of the graphite integrity aspects in EC 367095, the specialist has no objection to the subsequent Project Assessment Report recommending that agreement is given to the deferral of the DNB R21 2020 Statutory Outage to no later than 30 September 2021.

3.4 MECHANICAL ENGINEERING ASSESSMENT

28. The mechanical engineering assessment sampled the mechanical structures, systems and components that are important to nuclear safety and are subject to extra operational demand due to the statutory outage deferral. The assessment supports ONR's agreement to a deferral of the statutory outage of Dungeness B Reactor 21 to 30 September 2021.
29. The mechanical engineering specialist inspector recommended that should a further outage deferral be considered by NGL that consultation with the original equipment manufacturer (OEM) for gas circulators (GCs) should be considered. This recommendation has been communicated to Dungeness B in [Ref 14] and is captured as a recommendation in this report.

3.5 ELECTRICAL ENGINEERING ASSESSMENT

30. The electrical assessment [Ref 11] recommends that ONR gives Agreement to NGL's proposal to defer the Dungeness B Reactor 21 (019) statutory outage from 6 September 2020 to no later than 30 September 2021. It identified several regulatory concerns regarding the Station's electrical system which were unrelated to extending R21's operating period. The inspector is seeking improvement through regulatory Issue 8265.

3.6 CONTROL & INSTRUMENTATION ENGINEERING ASSESSMENT REPORT

31. The control and instrumentation (C&I) assessment [Ref 12] recommendation is that it has not identified any concerns that should prevent ONR giving Agreement to NGL's request for extension to the deferral of the Dungeness B Reactor 21 2020 periodic shutdown as set out in their submission.
32. Based on the C&I assessment of EC 367095 the specialist inspector considers that nuclear safety systems should not incur any significant decrease in their reliability and ability to perform their safety function. There should not be any significant increase in the risk of an initiating event during the extended period of operation, given that:

- Non-outage related Plant Maintenance Schedule (PMS) activities, such as function tests, calibrations and freedom of movement checks, will still be performed during the period of extension as appropriate.
 - The EIMT periodicities for C&I plant and equipment important to nuclear safety, sampled, are unlikely to be impacted. DNB proposes to defer the commencement of the outage and continue the period of operation for a period no longer than 30 September 2021.
33. The assessment considered the statements made by NGL Central Engineering Support (CES) SQEPs are adequate and the specialist inspector was content with the Licensee's proposal.

3.7 PROBABILISTIC SAFETY ASSESSMENT REPORT

34. The probabilistic safety assessment (PSA) report concluded that the potential risk increase due to the deferral of the statutory outage to September 2021 is low from the perspective of the PSA. Whilst the PSA does not consider all components and operating modes and often assumptions about testing and inspection are implicit rather than explicit, the results of the PSA assessment provide confidence that risk increase for deferring the outage is small for those aspects considered explicitly within the PSA. Judgements from a deterministic and engineering point of view should also be considered to complement the PSA assessment. It recommends permitting the deferral of the Dungeness B Reactor 21 outage until September 2021. [Ref 13]

3.8 ENGAGEMENT WITH OTHER GOVERNMENT AGENCIES

35. The EA site inspector for Dungeness B was informed that ONR intended to issue an LI giving its agreement to the extension of the plant operating period. EA confirmed that it had no objections to the deferral proposal and ONR issuing an agreement to extend the R21 operating period (CM9 2020/254045).

3.9 PRESSURE SYSTEMS SAFETY REGULATIONS

36. The Pressure Systems Safety Regulations 2000 (PSSR) require examinations to be carried out by the date specified in the last report, which must be within the limits set by the scheme of examination. After which the pressure system may not be operated without a further examination under the scheme of examination. Regulation 7 allows the specified date to be postponed provided it: does not give rise to danger; only one such postponement is made; and the postponement is notified to ONR before the specified examination is due.
37. For the proposed extension to the operating period the licensee needs to postpone several PSSR examinations relating to the Pre-stressed Concrete Pressure Vessel, its Penetrations and other pressure systems. The competent persons for these systems are Central Technical Organisation (CTO) Civil design Group; CTO Structural Integrity Branch, and Bureau Veritas respectively. The licensee has advised ONR of the postponements and engaged with the ONR PSSR specialist who has confirmed they are content with the licensee's strategy and approach (see 2020/315531). Copies of the competent persons documents confirming their agreement have been provided [CM9 2020/240320, 2020/240311 & 2020/305613]. In consultation with the PSSR specialist I judged that the postponement of PSSR examinations is compliant with the regulations. I consider the licensee's approach and strategy is adequate and there is no reason to withhold agreement to extending the operating period.

3.10 MATTERS ARISING FROM ONR'S WORK

38. For this assessment effort has been concentrated on judging the adequacy of the safety justification for extending the operating period. The reactor has spent a mean time at power of ~ 13 months in the three-year period since the last periodic shutdown and has been shut down for the remainder of the period. The requested extension to the operating period is for an additional 13 months to 30 September 2021. The assessment of the safety justification and ALARP arguments in EC 367095 therefore focussed on the degradation mechanisms associated with the extended outage period, the plant preservation activities undertaken, the completion of non-outage related maintenance schedule tasks and the impact of the additional 13-month operating period.
39. The team of specialist inspectors listed above considered the claims arguments and evidence presented in EC 367095 and concluded they were adequate and supported the licensee's claim that "nuclear safety systems will not incur any significant decrease in their reliability or functionality, and there will be no significant increase in the risk of an initiating event as a result of the deferral of the statutory outage"
40. Based on the specialist inspectors' recommendations, the licensee's own safety justification and the ALARP arguments I am of the opinion that the proposal to extend the operating period to 30 September 2021 will result in a negligible increase in safety risk. I consider the ALARP arguments are appropriate showing negligible safety benefit in completing the outage in September 2020 and articulating clear safety benefits in deferring the outage in terms of better planning, greater scope, reduced timescales and less opportunity for the transmission of the COVID 19 virus.
41. Reasonably practicable measure to reduce risks have been considered and undertaken such as the enhanced plant preservation programme undertaken during the double reactor outage and the number of PSSR postponements being minimised.
42. The specialist inspectors' judgements were supported by the evidence that:
 - NGL had sought input from the stations system engineers and other relevant suitably qualified and experienced personnel;

- Agreement was reached with the PSSR competent person regarding any proposed postponements of inspections;

4 CONCLUSIONS

43. This report presents the findings of my assessment of NGL's request to extend the operating period of R21 at Dungeness B to 30 September 2021 and contains my recommendation to the Operating Facilities Division regarding the permissioning decision.
44. To conclude, I am satisfied with the claims, arguments and evidence laid down within EC 367095. ONR's assessments judged the extension of the plants operating period to 30 September 2021 would have no, or negligible, impact on nuclear safety and raised no objections to the recommendation to 'agree' to the extension. The licensee's ALARP arguments demonstrate the benefits of extending the operating period and that reasonably practicable measures to reduce risks have been taken.

5 RECOMMENDATIONS

45. I recommend that, in accordance with LC 30(2) ONR should issue licence instrument 563 to Dungeness B Nuclear Licensed Site 'agreeing' to an extension of Reactor 21's operating period to no later than 30 September 2021.
46. ONR has advised Dungeness B that if, as expected, a further extension of the operating period to January 2022 is requested, the licensee should consider consulting with the OEM of the Gas Circulators [Ref 14]. I recommend this should be followed up by any subsequent mechanical engineering assessments as appropriate.

6 REFERENCES

1.	ONR Guide – <i>The Purpose and Use of Permissioning - NS-PER-GD-001 Revision X</i> . Month Year. http://www.onr.org.uk/operational/assessment/index.htm
2.	<i>Safety Assessment Principles for Nuclear Facilities</i> . 2014 Edition, Revision 1. January 2020. http://www.onr.org.uk/saps/saps2014.pdf .
3.	ONR Technical Assessment Guides, Identified in individual assessment reports. http://www.onr.org.uk/operational/tech_asst_guides/index.htm
4.	<i>Western European Nuclear Regulators' Association. Reactor Harmonization Group. WENRA Reactor Reference Safety Levels</i> . WENRA. September 2014. www.wenra.org .
5.	IAEA guidance – Identified in individual assessment reports www.iaea.org
6.	E-Mail [Containing] : Dungeness B Letter to ONR, Request For The Extension of the Operating Period for R21 from 6 th September 2020 to 30 September 2021, NSLDNB50989R, 16 July 2020 EC No.: 367095 000, Proposal Version No.: 03 - Dungeness B: Reactor 21 2020 (019) Statutory Outage Deferral EC No./Rev No.: 367095 / 000 Milestone Full INSA Approval Statement, 02 July 2020 CM9 2020/239136
7.	ONR-OFD-AR-20-046 Revision 0, Civil Engineering Assessment of Dungeness B Reactor 21 Statutory Outage (019) Deferral July 2020 to September 2021, September 2020, CM9 2020/256791
8.	ONR-OFP-AR-20-053 Revision 0, Structural Integrity Assessment, Postponement of Periodic Shutdown of Reactor 21, October 2020, CM9 2020/241646
9.	ONR-OFD-AR-20-42 Revision 0, Structural Integrity Assessment of the Graphite Aspects of EC 367095: Dungeness B Reactor 21. Proposal for the Deferral of the 2020 Statutory Outage 19 to 30 September 2021, September 2020, CM9 2020/248567
10.	ONR-OFD-AR-20-043 Revision 0, Mechanical Engineering Assessment of EC367095, 'Dungeness B: Reactor 21 2020 (019) Statutory Outage Deferral – Justification to September 2021', September 2020, CM9 2020/256076
11.	ONR-OFD-AR-20-044 Revision 0, Dungeness B: Reactor 21 2020 (019) Statutory Outage Deferral Justification to September 2021 - EC 367095 – Revision 0 Version 3, Electrical Engineering Assessment, September 2020, CM9 2020/255554
12.	ONR-OFD-AR-20-065 Revision 0, Control and Instrumentation assessment of the Dungeness B: Reactor 21 2020 (019) Statutory Outage Deferral Justification to September 2021 - EC 367095, October 2020, CM9 2020/303809
13.	ONR-OFD-AN-20-47 Revision 0, PSA Assessment of DNB R21 Outage Deferral to September 2021, September 2020, CM9 2020/262702
14.	E-mail NGL to ONR Response to Assessment & PAR Recommendations, October 2020, CM9 2020/303734