Hinkley Point B LC30(2) Extension of Operating Period

Extension of Hinkley Point B Reactor 4 Operating Period from 24 May 2022 to 31 July 2022

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EXECUTIVE SUMMARY

Extension of Hinkley Point B Reactor 4 Operating Period from 24 May 2022 to 31 July 2022.

Permission Requested

Hinkley Point B nuclear licenced site has requested ONR 'Agreement', under Licence Condition 30(2), to an extension of Reactor 4's operating period up to 31 July 2022. ONR has previously agreed to a 12-month extension of Reactor 4's operating period from 24 May 2021 to 24 May 2022.

This Project Assessment Report describes ONR's assessment of EDF Nuclear Generation Limit's (NGL) safety justification and records my regulatory views, judgements and recommendations.

Background

To maximise the final period of generation by utilising the remaining graphite burn up margin justified in the graphite safety case the licensee has requested a further operating period extension of 2 months up to 31 July 2022. The total operating period extension will therefore be 14 months. On 31 July 2022 the reactor can achieve a maximum of 1070 days at power which is less that the 1095 days between statutory outages.

The licensee has justified the safety of the additional two-month extension to the operating period in engineering change proposal EC 368163 revision 00 and 1. Plant maintenance schedule routines which are not outage related have been carried out in accordance with the requirements of the plant maintenance schedule.

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. Compliance with pressure systems safety regulations is confirmed.

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

My assessment strategy was to review EC 368163 revision 001 and confirm the conclusions from the original assessment of revision 000 remain valid for the revised 14-month extension period. Specialist inspectors in the following disciplines participated in the review: Probabilistic Safety Assessment, Graphite Integrity, Structural Integrity, Civil Engineering, Mechanical Engineering, Electrical Engineering and Control and Instrumentation

Matters arising from ONR's work

ONR specialists confirmed that the assessments carried out for EC 366163 Revision 000 remain valid for a further two-month extension to the plants operating period and there are no reasons to withhold ONR's agreement to extending the operating period to 31 July 2022.

Report ONR-OFD-PAR-22-002
CM9 Ref: 2022/24862

Conclusions

Based on the work carried out by ONR, I am satisfied that the claims arguments and evidence presented in EC 366163 Revision 001 provide an adequate safety justification for a further two-month extension of the plants operating period up to 31 July 2022.

Recommendation

I recommend that ONR should agree to the extension of the operating period of Hinkley Point B Site Reactor 4 from 24 May 2022 to 31 July 2022. LI 570 has been prepared.

Report ONR-OFD-PAR-22-002
CM9 Ref: 2022/24862

LIST OF ABBREVIATIONS

ALARP	As low as reasonably practicable
C&I	Control and Instrumentation
EA	Environment Agency
EC	Engineering Change
GIO	Graphite Inspection Outage
HOW2	(Office for Nuclear Regulation) Business Management System
HPB	Hinkley Point B
INSA	Independent Nuclear Safety Assessment
LC	Licence Condition
NGL	Nuclear Generation Limited
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report
PCPV	Pre-stressed Concrete Pressure Vessel
PMS	Plant Maintenance Schedule
PSA	Probabilistic Safety Analysis
PSSR	Pressure Systems Safety Regulations
R4	Reactor 4
SAP	Safety Assessment Principle(s)

TABLE OF CONTENTS

1 BACKGROUND 7
2 ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST 8
3 MATTERS ARISING FROM ONR'S WORK 14
4 CONCLUSIONS 15
5 RECOMMENDATIONS 15
6 REFERENCES 16

Report ONR-OFD-PAR-22-002
CM9 Ref: 2022/24862

PERMISSION REQUESTED

1. ONR issued LI 565 [Ref 4] to extend the Hinkley Point B Reactor 4 operating period by 12 months from 24 May 2021 to 24 May 2022. EDF Energy Nuclear Generation Limited (NGL), the licensee for the Hinkley Point B (HPB) nuclear licenced site has requested ONR 'Agreement', under Licence Condition 30(2), to a further operating period extension of two months up to 31 July 2022. [Ref 5]

2. This Project Assessment Report describes ONR's assessment of engineering change (EC) 368163 Rev 001 [Ref 5] which provides NGL's safety justification for the proposed extension and records my regulatory views, judgements and recommendations made in consideration of this request.

1 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 Hinkley Point B PMS specifies the plant shall be shutdown three years after ONR's consent to start-up. ONR has approved the preface under LC28 (4).

4. ONR's last consent to start up Reactor 4 (R4) was issued on 25 May 2018, so LC 30(1) required the plant to be shutdown by 24 May 2021 in compliance with the three-year interval specified in the PMS preface. In accordance with LC 30(2) ONR agreed [Ref 4] to extend the plant's operating period by twelve months up to 24 May 2022.

5. To maximise the final period of generation by utilising the remaining graphite burn up margin justified in the graphite safety case the licensee has requested a further operating period extension of two months up to 31 July 2022 [Ref 5]. The total operating period extension will therefore be 14 months. Due to reactor shutdowns and planned graphite inspection outages (GIO) occurring since May 2018 the maximum achievable time at power since the last outage up to 31 July 2022 will be 1070 days. This is less than the maximum 1095 days (3-years) at power allowed between statutory outages.

6. The licensee has justified the safety of the additional two-month extension to the operating period in engineering change proposal EC 368163. Revision 000 of this EC justified extending the period from May 2021 to May 2022 and this has been amended to Revision 001 which justifies the additional two months and a total extension to operating period of 14 months.

7. Plant maintenance schedule routines which are not outage related have been carried out in accordance with the requirements of the PMS.

8. The EC 368163 states that with respect to pressure systems safety regulations (PSSR) inspections, all inspections have already been postponed to (at least) the end of July 2022 so no further postponements are required.

9. 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. It is a safety category 2 proposal.

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

10. The permissioning and assessment of this proposal has been carried out in accordance with ONR's HOW2 management system requirements, ONR permissioning guidance [Ref 1], the Safety Assessment Principles [Ref 2], and Technical Inspection Guidance [Ref 3].

11. Before agreeing to the original 12-month operating period extension to 24 May 2022 ONR carried out an assessment to confirm the adequacy of EC 368163 Revision 000. This is recorded in a project assessment report (PAR) [Ref 6].

12. The strategy adopted to give ONR confidence to 'agree' an additional two-month extension up to 31 July 2022 was to carry out a proportionate review of EC 368163 revision 001. The purpose of this was to confirm if the conclusions from the original assessment of revision 000 [Ref 6] remained valid for a 14-month extension to the plants operating period, and to establish if there were any reasons why ONR should not agree to the additional two -month extension.

13. The assessment of EC 368163 revision 000 was conducted by the specialist inspectors listed below. The same disciplines conducted a proportionate review for revision 001.

- Probabilistic Safety Assessment
- Graphite Integrity
- Structural Integrity
- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- Control and Instrumentation

14. The specialists' reviews are summarised below.

2.1 PROBABILISTIC SAFETY ASSESSMENT (PSA)

15. A PSA specialist inspector assessed the impact on the HPB reactor PSA and ran a sensitivity analysis for extending the outage interval from 3 years to 4 years 2 months. This has an impact on the reliability of components in the

PSA which are modelled on a test interval aligned with the 3-year statutory outage period. The assessment concluded the overall impact on the risk is small with a DB5 frequency increase from 7.36E-06 to 7.48E-06, which is a 1.63% increase (reactor PSA only).

16. The specialist also looked at the most risk significant components which have a test interval in the PSA aligned with the statutory outage frequency. The most significant are listed in [Ref 7] and this information was made available to other specialists to inform their assessments. None of the components have a high-risk significance.

2.2 GRAPHITE INTEGRITY

17. I discussed the proposed extension with a graphite integrity specialist inspector, their opinion was the graphite considerations are ultimately covered by core burn up limits. As long as the deferral does not intend to exceed those burnup limits, or change them, ONR does not need any further consideration of the deferral from a graphite integrity perspective. [Ref 8]

2.3 STRUCTURAL INTEGRITY REVIEW

18. A structural integrity specialist inspector carried out a review of EC 368163 Revision 001 [Ref 9]. The conclusions of the review are listed below.

19. Deferral until 24 May 2022 was previously agreed by the ONR for decision record, ONR-OFD-DR-21-074 (Ref. 10), which concluded that from a structural integrity specialism perspective, compliance with LC28 and PSSR would be sustained despite postponing the next periodic shutdown until the 24 May 2022. The assessment considered potential cliff-edge effects to determine whether or not the proposed two-month extension poses any threat to LC28 and PSSR compliance.

20. To support Rev 001, a gap analysis of the original plant area review which supported Rev 0 has been undertaken.

21. The specialist reviewed the aspects of the Gap Analysis in Appendix 4 [Ref 14] which were considered important to nuclear safety. This included; CO2 pipework and filter vessel, gas bypass plant, steel parts of the pressure vessel and its internal components including the boilers, boiler feed and cooling system, N2 supplies and steam pipework. The specialist did not identify any factors that would challenge the safety case during the extended period of operation, with no confirmatory work being required to support deferral for an additional two months.

22. The two-month extension would result in a maximum of 1070 ‘at power’ days. This is less than the nominal 1095 operation days that is achieved in the normal three year operating period. Based on this the licensee contends that, for degradation mechanisms which act only when the reactor is operating,

degradation of the plant by May 2022 will be less than would have occurred had R4 operated continually between 2018 and 2021. In addition, the dutyholder confirms that large margins exist to anticipated end of station life that would deem any unplanned trips during the extended period of operation to have a minimal effect on the fatigue life of the components. The specialist accepts this position and, on that basis, judged the postponement does not significantly affect the risk of degradation. This is affirmed by a review, conducted by an ONR inspector who specialises in probabilistic safety assessment, which concluded that the impact on risk to R4 is small (Ref 11) confirmed through a sensitivity study assuming an operating period extending from 3 to 4 years.

23. EC 368163 revision 001 [Ref 5] confirms that deferral of PSSR inspection have been agreed by the competent person which extends beyond the 31 July 2022. Ref 10 identified that adequate arrangements existed to address any potential postponement requirements and to remain compliant with PSSR regulations. The specialist was therefore content that extension of the operating period does not undermine compliance with PSSR.

24. In the specialist's opinion, the deferral does not significantly alter the risks from degradation as considered by ONR's decision record of the original proposed deferral to 24th May 2022. Furthermore, the dutyholder has established and confirmed that LC28 and PSSR compliance will be sustained despite this proposed postponement. In conclusion the structural integrity specialist did not object to the proposed deferral of the periodic shutdown of Hinkley Point B Reactor 4 to no later than 31st July 2022.

2.4 CIVIL ENGINEERING

25. A civil engineering specialist inspector carried out a review of EC 368163 Revision 001 [Ref 12]. The conclusions of the review are listed below.

26. The civil engineering specialist considered civil engineering aspects of the pre-stressed concrete pressure vessel (PCPV).

27. The specialist reviewed Appendix D of the Plant Area Review [Ref 14] and noted the following:

- Top cap deformation survey [MS/03/01/04/01] was previously deferred but has been completed during a recent graphite inspection outage. Note that [Ref 15] seems to indicate this has not been completed, but the specialist has confirmation that it has [Ref 16]. The results show top cap deformations consistent with long term trends.
- The concrete surveys are the only examinations (aside from the report) which are not yet complete. Surveys need to be undertaken on-load and off-load to compare presence and size of cracks (for example, some cracks close when the vessel is depressurised). The on-load concrete surface examinations are programmed for May 2022. The

specialist understands that revision 000 of the Appointed Examiner's report will contain results from the on-load concrete survey and the report will be updated during the defuelling outage with the results of the off-load survey [Ref 16].

- Recommendation 'D.3' was previously raised to request production of the Appointed Examiner report to be produced out-with a statutory outage. As not all PCPV surveys are complete, it is proposed to delay production of the report until the statutory outage and once all examinations are completed (however see next paragraph).
- PSSR (2000) Regulation 9 (3) requires that a report be produced within 28 days following completion of the final examination. The Appointed Examiner has identified this limitation in his milestone acceptance [Ref 16] and therefore confirmed that the delivery date for the Appointed Examiner report will not be affected by the deferral (25th July 2022), noting that the report will be revised during the defueling outage. The specialist considers that the report will adequately satisfy the PSSR (2000) Regulation 9 reporting requirements.
- No significant findings or nuclear safety significant defects have been raised against the PCPV during the ERR.

28. Other relevant considerations:

- The PCPV tendons provide pre-stress to the concrete, ensuring it is kept in a compressive state. The most recent tendon load checks were undertaken in November 2019. The next tendon load checks are due in November 2022. The results reported in [Ref 13] for the average effective loads for upper and lower tendons were 1620kN and 1677kN respectively. The relaxation of the tendons is well understood, and the load check results over time indicate that the reduction in load has essentially bottomed out. The regression used to predict ongoing levels of pre-stress demonstrates adequate pre-stress remains for the duration of the deferral and beyond [Ref 13]. The specialist noted that this aspect is unaffected by the proposed HPB R4 outage deferral.
- The specialist noted a number of inspections are unaffected by the deferral of the outage and have already been completed (or are continuously monitored). The specialist reviewed the previous ONR assessment of the initial deferral for a period of 12 months [Ref 13]. The inspector raised no concerns and carried out a review of the PCPV given that the deferral represented a ~35% increase of PSSR 2000 examination timescales.
- The Appointed Examiner for the PCPV has been involved in the decision making process and states in his milestone [Ref 16] 'The additional period of operation, from an Appointed Examiner (Competent Person) perspective will not challenge the integrity or function of the vessel.'

29. Overall, based on the civil engineering assessment of the deferral's impact on the PCPV, the specialist had no objections to the extension of the operating period to no later than 31 July 2022. The review primarily considered SAPs ECE.3 and EAD.2.

2.5 MECHANICAL ENGINEERING

30. A mechanical engineering specialist inspector carried out a review of EC 368163 Revision 001 [Ref 17]. The conclusions of the review are listed below.

31. The approach and scope of assessment was agreed by the Mechanical Engineering Professional Lead in a meeting on 30 January 2022 , as recorded in e-mail CM9 2022/27055.

32. The previous mechanical engineering assessment of EC 366163 Rev 000 (Ref. 18) supported ONR's agreement to an extension of the operating period of Hinkley Point B Reactor 4 to 24th May 2022). This made two recommendations that have been addressed by Hinkley Point B and are considered closed (Ref. 19).

33. The assessment has considered the scope of the previous assessment detailed in Ref 18 and focusses on any changes that would affect the ability of Hinkley Point R4 to continue operating for a further two months prior to the R4 pre-defueling statutory outage. Hinkley Point B's intent is to perform a pre-defueling statutory maintenance outage on Reactor 4 soon after shutdown. Hence consideration of continued operation of plant for a period post shutdown but prior to maintenance was not required within this assessment.

34. To support Rev 1, a gap analysis of the original plant area review which supported Rev 0 was undertaken. The gap analysis, contained in Appendix 4 [Ref 14] of the safety case involved a review of each major plant system in terms of its operational history, inspection requirements, previous inspection findings and safety case constraints for the period since the report was produced. Furthermore, a consideration of the impact of an extension of the periodic shutdown deferral was also addressed. The specialist reviewed aspects of Appendix 4 considered important to nuclear safety and relevant to mechanical engineering, these include the gas circulator systems and CO2 safety relief valves. No factors were identified that would challenge the safety case during the extended period of operation, with no confirmatory work required to support deferral for an additional two months. The specialist accepts this position and, on that basis, judge the postponement does not significantly affect the licensee's claim that the Gas Circulators and CO2 Safety Relief Valves continue providing their nuclear safety function until the deferred outage start date of 31July 2022.

35. In conclusion, the mechanical engineering specialist inspector, does not object to the proposed deferral of the periodic shutdown of Hinkley Point B Reactor 4 to no later than 31 July 2022.

2.6 ELECTRICAL ENGINEERING

36. A electrical engineering specialist inspector carried out a review of EC 368163 Revision 001 [Ref 20]. The conclusions of the review are listed below.

37. The electrical engineering assessment was undertaken in the context of ONR's engineering safety assessment principles (SAP) (frequency of maintenance, inspection and testing (EMT.2) and licence conditions 27, 28 and 30 (Safety mechanisms, devices and circuits, examination, inspection, maintenance and testing and periodic shutdown respectively)). The specialist sampled those areas considered to be most applicable, considering the overall modification proposal and its history.

38. The electrical engineering assessment builds on the previous assessment of EC 368163 (Ref 21) and considers the gap analysis produced (Ref 14). The specialist sampled items considered important to nuclear safety, this included section 'M' of the gap analysis covering gas circulators and gaseous systems, and section 'O' covering essential supplies (including transformers). The specialist discussed with the station and was content with the responses provided.

39. The specialist is content that the evidence provided supports the NGL claim that the operational history of R4 is satisfactory and that there are no anticipated cliff edge effects. No matters of significant concern were identified that were not already being addressed or are the subject of actions to take corrective measures within the station arrangements.

40. The specialist is content with the findings of the independent nuclear safety assessment which concluded the original assessment provided for revision 000 remains valid for the additional two-month extension of the deferral.

41. The specialist therefore concludes they are satisfied with the claims arguments and evidence provided within the NGL proposal and has not identified anything of safety significance in relation to electrical engineering aspects that should prevent the deferral of the periodic shutdown from 24 May 2022 to no later than 31 July 2022. The specialist recommends that ONR gives 'Agreement' to an extension to the deferral of the maintenance period of Hinkley Point B R4 2021 periodic shutdown.

2.7 CONTROL AND INSTRUMENTATION (C&I)

42. A C&I engineering specialist inspector carried out a review of EC 368163 Revision 001 [Ref 22]. The conclusions of the review are listed below.

43. As part of normal regulatory business, the specialist had previously confirmed a recommendation to carry out a 'health check' of thermocouples had been carried out. They were satisfied with NGL's conclusion that the coverage,

population and redundancy of healthy in-core thermocouples would remain satisfactory for the extension period and there are no cliff-edge effects.

44. The specialist sampled C&I aspects of the gap analysis review [Ref 14] considered important to nuclear safety, which included aspects of the same plant areas (i.e. including thermocouples, reactor safety systems, gas circulators and reactor shutdown sequence equipment) that were the focus of the original assessment.

45. The specialist sought further confirmation that NGL has considered the potential for C&I equipment to reach a reliability cliff edge or drift to an extent that compromises delivery of a nuclear safety function and has deemed this to be acceptably low.

46. Based on a review of the C&I assessment of the 12-month deferral and supporting references (and particularly the gap analysis review), the specialist is content that the evidence provided supports the NGL claim that the operational history of R4 is satisfactory and that there are no anticipated cliff edge effects.

47. Overall, the specialist was satisfied with the claims made in EC 368163 Revision 1 and with the independent nuclear safety assessment carried out by NGL.

48. The specialist recommended that ONR gives 'Agreement' to NGL's request for an extension to the deferral of HPB R4 2021 statutory outage by an additional two-months to no later than 31 July 2022.

2.8 ENVIRONMENT AGENCY (EA)

49. The EA site inspector for Hinkley Point B has been informed of the request for ONR agreement to a further extension of the operating period to 31 July 2022 and has no issues with the proposal. [Ref 23]

2.9 EDF INDEPENDENT NUCLEAR SAFETY ASSESSMENT PROCESS

50. Independent Nuclear Safety Assessment (INSA) has been carried out in accordance with the requirements of the Site Licence Arrangements. INSA is content that any increase in risk from a deferral of the Hinkley Point B R4 statutory outage from 2021 to 31 July 2022 is very low and is ALARP, noting the Appointed Examiner approval of this Revision 001 of the proposal. This provides ONR with additional confidence in the proposal. [Ref 5]

3 MATTERS ARISING FROM ONR'S WORK

51. The matters arising from the work carried out by ONR specialist are summarised as follows.

52. The ONR specialist inspectors listed above have reviewed the claims arguments and evidence presented in EC 366163 Revision 001 and have confirmed that the assessments carried out for EC 366163 Revision 000 remain valid for a further two-month extension to the plants operating period and there are no reasons to withhold ONR's agreement to extending the operating period to 31 July 2022.

53. NGL's INSAprocess supports the proposal and EA has confirmed they have no reasons for ONR to withhold agreement.

4 CONCLUSIONS

54. Based on the work carried out by ONR, I am satisfied that the claims arguments and evidence presented in EC 366163 Revision 001 provide an adequate safety justification for a further two-month extension of the plants operating period up to 31 July 2022.

5 RECOMMENDATIONS

55. I recommend that ONR should agree to the extension of the operating period of Hinkley Point B Site Reactor 4 from 24 May 2022 to 31 July 2022. LI 570 has been prepared [Ref 24].

6 REFERENCES

1. *ONR Guide – The Purpose and Use of Permissioning - NS-PER-GD-001 Revision 5*. May 2021. http://www.onr.org.uk/operational/assessment/index.htm

2. *Safety Assessment Principles for Nuclear Facilities*. 2014 Edition, Revision 1. January 2020. http://www.onr.org.uk/saps/saps2014.pdf.

3. Technical Inspection Guides (TIGs)
http://www.onr.org.uk/operational/tech_asst_guides/index.htm

   LC 28 Examination, Inspection, Maintenance and Testing, NS-INSP-GD-028 Revision 8, January 2021

   LC 30 – Periodic Shutdown, NS-INSP-GD-030 Revision 6 June 2019

4. Hinkley Point B Agreement Licence Instrument 565 – Extension to Operating Period May 2021 – May 2022, May 2021 CM9 2021/6057

5. Email from EDF, March 2022, CM9 2022/22126
Containing
Letter NSL HPB 51458 requesting extension of Hinkley point B operating period.
Engineering Change EC 368163 revision 001
INSA Notes and Approval for EC 368163
Verification Comments for EC 368163
Topic Proposal for EC 368163
Summary Document for EC 368163

6. Project Assessment Report Number ONR-OFD-PAR-21-02 EC 368163 revision 0 - Extension to Hinkley Point B Reactor 4 Operating Period May 2021 to May 2022 – May 2021 – CM9 2021/6055

7. E-mail Probabilistic Safety Assessment Review EC 368163 - Extension to Operating Period, March 2022, CM9 2022/28184

8. Email – Graphite Integrity Review - Deferral of the Hinkley B Point R4 statutory outage from April 2021 to May 2022, March 2022, CM9 2022/22139

9. Email – Structural Integrity Review- Deferral of the Hinkley Point B R4 statutory outage from April 2021 to May 2022, March 2022, CM9 2022/21478

10. ONR-OFD-DR-21-074 Rev 0, Postponing the next period shutdown of Hinkley Point B Reactor 4 – Structural Integrity Decision Record CM9 2021/23945

11. Email. Outage deferral PSA sensitivity. CM9 2021/8201

12. Email – Civil Engineering Review- Deferral of the Hinkley Point B R4 statutory outage from April 2021 to May 2022, March 2022, CM9 2022/24534

13. ONR-OFD-AR-20-114 Reactor 4 Statutory Outage Deferral, April 2021 to May 2022 CM: 2021/22591

14. EC No. 368163 001 Appendix 4 Version No. 01 Gap Analysis Review - HPB R4 2021 Extension Outage Deferral CM: 2022/18581

15. EC no. 368163 001 Proposal Version No. 00 Hinkley Point B R4 Statutory Outage Deferral From 2021 To 2022 Rev 001 - Additional 2 Month Extension CM: 2022/18581

16. HPB R4 Outage Deferral, Email from the HPB Appointed Examiner, 14 April 2022. CM: 2022/0024467

17. Hinkley Point B Reactor 4 2022 Outage Deferral Mechanical Engineering Assessment - Assessment Note, May 2022, CM9 Ref 2022/27300

18. ONR-OFD-AR-21-004 Rev 0, Mechanical Engineering Assessment of EC368163 Rev 03, 'Hinkley Point B: Reactor 4 Statutory Outage Deferral from 2021 to 2022'. CM9 2021/32769

19. ONR-OFD-CR-21-171, Site Visits and Meetings – 17th to 19th May 2021, CM9 2021/43484

20. RE EE assessment of EC 368163 - Hinkley Point B R4 Statutory Outage Deferral from 2021 to 2022 Rev 001 Additional 2 Month Extension, May 2022, CM9 2022/27296

21. ONR-OFD-AR-21-007 Rev 0, Hinkley Point B Reactor 4 Statutory Outage Deferral from 2021 to 2022 - EC 368163 – Revision 0, CM9 2021/32732

22. C&I Assessment [Rev. 0] of EC 368163 Rev 001 - Hinkley Point B R4 Statutory Outage Deferral from 2021 to 2022, additional 2-month extension, May 2022, CM9 2022/27775

23. Email from Environment Agency, April 2022 CM9 2022/24275

24. Licence Instrument 570 – Agreement to the extension of Hinkley point B Reactor 4 Operating Period from 24 May 2022 to 31 July 2022, May 2022, CM9 2022/24866