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**Changes to Licence Condition (LC) 11 Site Emergency Plans for Atomic Weapons  
Establishment (AWE) Aldermaston and AWE Burghfield**

**Permissioning of Alteration of Approved Site Emergency Plans for AWE Aldermaston  
and AWE Burghfield**

Project Assessment Report ONR-OFD-PAR-17-014

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### EXECUTIVE SUMMARY

#### **Permissioning of Alteration of Approved Site Emergency Plans for AWE Aldermaston and AWE Burghfield**

##### **Permission Requested**

The licensee (i.e. AWE plc) has requested the Office for Nuclear Regulation's (ONR) 'Approval' under Licence Condition (LC) 11(3) for the substitution of the document titled – "AWE Aldermaston Site Emergency Plan", AWE/DI/02/02/1000, Issue 8.1, October 2019, for the document titled "AWE Aldermaston Site Emergency Plan", AWE/DI/02/02/1000, Issue 5, February 2016.

##### **And**

For the substitution of the document titled – "AWE Burghfield Site Emergency Plan," AWE/DI/SRG/02/01/1050, Issue 8.1, October 2019, for the document titled "AWE Burghfield Site Emergency Plan," AWE/DI/SRG/02/01/1050, Issue 5, February 2016.

##### **Background**

Following a prolonged period of industrial action at AWE in 2016, during which the licensee's on-site emergency response capability (at both Aldermaston and Burghfield) became degraded on days of industrial action, the licensee has put in place new Emergency Plans at each site to manage situations where the core emergency response capabilities may become degraded. Such situations include, but are not limited to, major pandemics, national emergencies, extreme weather and industrial action. These situations are deemed to be those which go beyond those already accounted for by standard AWE business continuity arrangements.

In addition the licensee has revised its Site Emergency Plan, for AWE Aldermaston, to include new roles of Emergency Co-Ordinator-Aldermaston (EC-A) and Facility Liaison Officer (FLO) and to remove the old Facility Emergency Controller (FEC) role.

The new emergency plans are presented within revisions of the extant AWE Aldermaston (i.e. AWE/DI/02/02/1000, Issue 5, February 2016) and AWE Burghfield (i.e. AWE/DI/SRG/02/01/1050, Issue 5, February 2016) Site Emergency Plans. These revisions to the AWE Aldermaston and AWE Burghfield Site Emergency Plans (i.e. Issue 8.1 of the documents) require formal ONR 'Approval', as per Licence Condition (LC) 11(3). The purpose of this Project Assessment Report (PAR) is to present the work ONR has conducted, in reaching a decision to grant the licensee's request for approval of the new Issue 8.1 of its Site Emergency Plans for AWE Aldermaston and AWE Burghfield.

The Emergency Plans described to in this document refer to those plans that cover on-site arrangements. Equivalent documentation that covers off-site Emergency Plans is generated and maintained by the relevant Local Authority.

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

ONR has sampled the licensee's revised Issue 8.1 Site Emergency Plans for AWE Aldermaston and AWE Burghfield to ensure that the new arrangements, managing the unavailability of core emergency response capabilities, meet ONR's expectations. In addition the new Issue 8.1 documents have been compared to the previous Issue 5 versions of the documents, to identify and understand any other substantive changes that have been made.

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Recognising that the new Issue 8.1 Aldermaston Site Emergency Plan introduces new roles and also removes a previous role, ONR also sampled the licensee's Licence Condition (LC) 36 submission for these changes (i.e. AWE's risk assessment of organisational change).

The above changes to Command and Control (C&C) arrangements at AWE Aldermaston i.e. the introduction of the EC-A and FLO have also been demonstrated satisfactorily to ONR, along with a satisfactory demonstration with support by external fire and rescue capability (which may be required in the event that AWE core emergency response capabilities become unavailable), via a number of exercises.

ONR is satisfied that the changes to the licensee's Issue 8.1 emergency plans (described above) have satisfactorily completed the licensee's own due process, with no residual matters being outstanding which would preclude ONR's 'Approval' of the new Issue 8.1 Site Emergency Plans.

ONR has consulted with a range of other Government Departments (OGD), to seek their views with respect to ONR's intention to Approve the revised Site Emergency Plans at Issue 8.1.

### **Matters arising from ONR's work**

There are no outstanding matters from the work conducted by ONR in its consideration of the licensee's request, which would preclude ONR's 'Approval' of the licensee's Issue 8.1 Emergency Plans for Aldermaston and Burghfield.

### **Conclusions**

It is concluded that the licensee's revised Issue 8.1 Site Emergency Plans, for AWE Aldermaston and AWE Burghfield, have been demonstrated to ONR's satisfaction by observing exercises. From its sampling of these Issue 8.1 Site Emergency Plans for Aldermaston and Burghfield, there are no outstanding matters from the work conducted by ONR in its consideration of the licensee's request, which would preclude ONR's 'Approval' of the licensee's Issue 8.1 Site Emergency Plans for Aldermaston and Burghfield.

### **Recommendation**

It is recommended that 'Approval' Licence Instruments 535 (Burghfield) and 536 (Aldermaston) be issued to approve the substitution of Issue 8.1 of the AWE Aldermaston Site Emergency Plan (AWE/DI/02/02/1000) and Issue 8.1 of the AWE Burghfield Site Emergency Plan (AWE/DI/02/02/1000, Issue 5 February 2016 and AWE Burghfield Site Emergency Plan (AWE/DI/02/02/1000, Issue 5 February 2016 and AWE Burghfield Site Emergency Plan (AWE/DI/02/02/1000, Issue 5 February 2016. The previous Office for Nuclear Regulation 'Approval' Licence Instruments (No. 532), which permissioned the introduction of Issue 5 of the Emergency Plans for Aldermaston and Burghfield, are hence withdrawn.

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### LIST OF ABBREVIATIONS

AWE	Atomic Weapons Establishment
C&C	Command and Control
DF&R	Defence Fire and Rescue
DNSR	Defence Nuclear Safety Regulator
EA	Environment Agency
EC-A	Emergency Co-Ordinator-Aldermaston
FEC	Facility Emergency Controller
FLO	Facility Liaison Officer
HSE	Health and Safety Executive
HID	Hazardous Industry Directorate (of HSE)
LC	Licence Condition
LI	Licence Instrument
LMfS	Leadership and Management for Safety
MoD	Ministry of Defence
NSC	Nuclear Safety Committee
OGD	Other Government Departments
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report
REPPIR	Radiation Emergency Preparedness and Public Information Regulations
SGM	Site Governance Meeting

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### 1 PERMISSION REQUESTED

1. The Licensee (i.e. AWE plc) has requested (Reference 1) the Office for Nuclear Regulation's (ONR) 'Approval', under Licence Condition LC 11(3), for:-
  - Substitution of the document AWE/DI/02/02/1000, Issue 8.1, October 2019, "AWE Aldermaston Site Emergency Plan", for the document AWE/DI/02/02/1000, Issue 5, February 2016, "AWE Aldermaston Site Emergency Plan."
  - Substitution of the document AWE/DI/SRG/02/01/1050, Issue 8.1, October 2019, "AWE Burghfield Site Emergency Plan," for the document AWE/DI/SRG/02/01/1050, Issue 5, February 2016, "AWE Burghfield Site Emergency Plan."

The drafts of Issues 6, 7 and 8 of the Site Emergency Plan documents, for both Aldermaston and Burghfield, were withdrawn by the licensee after the identification of a number of errors in these documents and hence were never 'Approved' by ONR. These previous drafts are hence not referred to further in this document.

### 2 BACKGROUND

2. The AWE Aldermaston and AWE Burghfield nuclear licensed sites are owned by the Ministry of Defence (MoD) and are operated by AWE plc. The sites contain a wide range of scientific and industrial facilities, some of which undertake licensable activities.
3. Licence Condition (LC) 11(1) of Nuclear Site Licence 77 (Aldermaston) and 78A (Burghfield) requires AWE to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects. ONR 'Specified' (Reference 2), under LC 11(2), that AWE submit its Emergency Plans for Aldermaston and Burghfield for ONR 'Approval' and that the plans may not then be altered or amended without ONR's 'Approval' under LC 11(3). Licence Instrument LI 532 (Reference 3) was issued on 30<sup>th</sup> March 2016 approving the documents AWE/DI/02/02/1000, Issue 5, February 2016 – "AWE Aldermaston Site Emergency Plan" (Reference 4) and the document AWE/DI/SRG/02/01/1050, Issue 5, February 2016 – "AWE Burghfield Site Emergency Plan" (Reference 5).
4. However, since References 4 and 5 were issued, AWE plc has experienced a period of prolonged industrial action in 2016, which degraded emergency response capabilities on industrial action days. Accordingly, the licensee has put in place new emergency plans to manage situations where the core emergency response capabilities may become degraded. Such situations include, but are not limited to, major pandemics, national emergencies, extreme weather and industrial action. These situations are deemed to be those which go beyond those already accounted for by standard AWE business continuity arrangements.
5. In addition AWE has revised its Site Emergency Plan, for AWE Aldermaston to include new roles of Emergency Co-Ordinator-Aldermaston (EC-A) and Facility Liaison Officer (FLO) and to remove the old Facility Emergency Controller (FEC) role.
6. The new emergency plans are presented within revisions of the extant AWE Aldermaston (i.e. AWE/DI/02/02/1000, Issue 5, February 2016) and AWE Burghfield (i.e. AWE/DI/SRG/02/01/1050, Issue 5, February 2016) Site Emergency Plans. These revisions to the AWE Aldermaston and AWE Burghfield Site Emergency Plans (i.e. Issue 8.1 of the documents) require formal ONR 'Approval', as per Licence Condition (LC) 11(3). The purpose of this Project Assessment Report (PAR) is to present the

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work ONR has conducted, in reaching a decision to grant the licensee's request for approval of the new Issue 8.1 of its Site Emergency Plans for AWE Aldermaston and AWE Burghfield.

7. The Emergency Plans described to in this document refer to those plans that cover on-site arrangements. Equivalent documentation that covers off-site Emergency Plans is generated and maintained by the relevant Local Authority.
8. The purpose of this PAR is to present the work ONR has conducted, in reaching a decision to grant the licensee's request for approval of the new Issue 8.1 of its Site Emergency Plans for AWE Aldermaston and AWE Burghfield.

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

9. AWE submitted a Draft C of Issue 8 (November 2018) of its Site Emergency Plans for Aldermaston and Burghfield for ONR sampling, prior to formal submission of Issue 8 for ONR 'Approval'. Following sampling of these Draft C Issue 8 documents, a number of ONR questions were raised (Reference 8), to which the licensee responded in Reference 9.
10. The licensee's responses in Reference 9 were generally acceptable, but further ONR correspondence in Reference 10 identified a number of footnotes that it was felt would be a helpful addition to the Issue 8 emergency plan documents. A telephone discussion was subsequently held with the licensee and it was noted that the Issue 8 Emergency Plans would, in due course, be revised to Issue 9 i.e. due to changes required under the Radiation Emergency Preparedness and Public Information Regulations, REPPiR, 2019.
11. It was accepted that the changes, requested by ONR in Reference 10, do not undermine the intent of the Issue 8 documents and could most easily be accommodated at the Issue 9 revision, to avoid nugatory work in re-submitting the current Issue 8 documents through the AWE due process. Reference 11 from AWE committed to making these future changes to the documents at Issue 9 and a routine Level 4 regulatory meeting has been set up with AWE to track eventual completion of this work. [Note – AWE has since produced Issue 8.1 of the emergency plans documentation, which addresses some minor factual discrepancies in the Issue 8 documentation, identified by Other Government Departments - OGD. However, the comments made in this paragraph apply equally to the Issue 8.1 documents].
12. To assess the impact of new roles and the removal of one role at Aldermaston in the new Site emergency Plan Reference 12 was sampled by an ONR Leadership and Management for Safety (LMfS) specialist assessor. The findings are detailed in References 13 and 14. The LMfS specialist inspector sampled the Organisational Change Assessment form to support implementation of the C & C Structure at AWE Aldermaston, References 13 and 14. The assessment of this sample noted:
  - A suitable range of options have been reviewed by the licensee, as potential alternatives to the proposed change and these were considered by the licensee in a separate study.
  - A risk assessment has been completed, which applied a logical structured approach to consideration of the main risks and proposed suitable mitigation.
  - Advice was identified regarding AWE undertaking a post change review and this has been included in a Level 4 Regulatory Issue (to allow ONR to track completion of this AWE exercise)

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13. The LMfS specialist assessor therefore concluded, from the sample of Reference 12, that a risk assessment of the proposed organisational change had been completed and the inspector supported a decision for the change to be permissioned.
14. Whilst Reference 13 notes that AWE's current LC 36 ("Organisational Capability") arrangements do not facilitate an adequate risk assessment, ONR enforcement action against LC 36 is presently in progress which should address this shortfall.
15. Notwithstanding, however, an ONR Level 4 Regulatory Issue will be recorded to reflect the need for AWE to complete a review of the C & C arrangements change after circa 4 – 6 months. This proposed review should consider how effective the change has been and whether further change is required, along with seeking any learning that should be captured and/or shared.
16. Finally, the ONR Nominated Site Inspector for AWE witnessed a satisfactory demonstration of the external fire and rescue capability (Reference 15) i.e. a demonstration of the new Issue 8.1 emergency plans. A further satisfactory exercise was conducted at AWE Aldermaston in October 2019, which was also witnessed by ONR (Reference 16).
17. Reference 11 notes that the Issue 8 Emergency Plans documents, for AWE Aldermaston and AWE Burghfield, were taken through AWE governance (Peer Review – Reference 17, Nuclear Safety Committee, NSC, Reference 18 and Site Governance Meeting, SGM, Reference 19) in November 2018 for review and ultimate approval. However, comments were received from external stakeholders (see Section 5 below) that warranted a minor uplift to the document to Issue 8.1, to address inaccuracies in the documents identified by these stakeholders and to address some minor grammatical errors. No fundamental changes were made to the plans at this up-issue to Issue 8.1. The AWE NSC Chair was approached following these minor updates, to determine if the NSC wished to review the documents again at Issue 8.1. The NSC Chair confirmed that this was not required, as none of the changes made at Issue 8.1 fundamentally affected the document. Reference 11 includes e-mail correspondence supporting this position.
18. Issue 8.1 of the emergency plans was presented to the AWE SGM on 10/10/2019 for endorsement to release to ONR for 'Approval' (Reference 20). The SGM requested that as Peer Review had originally been completed against the Issue 8 documents, a further validation of the Issue 8.1 documents should be undertaken. Since the minutes from the SGM meeting of 6/11/2019 had not yet been issued when this PAR was written, Reference 11 provided assurance that it was confirmed to the SGM on 6<sup>th</sup> November that this additional Peer Review check had been completed satisfactorily. Reference 11 also notes that Peer Review finding No. 2 (see Reference 17) will be addressed in Issue 9 of the emergency plans. Accordingly, ONR is content that AWE's Issue 8.1 emergency plans have successfully completed AWE's due process.
19. From its sampling, ONR considers that the new Issue 8.1 Site Emergency Plans adequately address the challenges to AWE's emergency arrangements, highlighted by the recent protracted period of industrial action. In addition ONR is satisfied that no further work is required at this juncture, in respect of the licensee's assessment of its organisational changes with respect to C & C arrangements at AWE Aldermaston.
20. Consequently, it is appropriate for ONR to approve the new Issue 8.1 Site Emergency Plans for AWE Aldermaston and AWE Burghfield.

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### 4 MATTERS ARISING FROM ONR'S WORK

21. There are no outstanding matters from the work conducted by ONR in its consideration of the licensee's request, which would preclude ONR's 'Approval' of the licensee's Issue 8.1 of the Site Emergency Plans for AWE Aldermaston and AWE Burghfield. However, an ONR Level 4 Regulatory Issues will be raised to:-
- Ensure an AWE review takes place in circa 4 – 6 months of the 'bedding in' of the new C & C arrangements for AWE Aldermaston.
22. In addition a routine Level 4 regulatory meeting has now been established with the licensee, to track to completion (in the future Issue 9 emergency plans documents) the addition of a number of footnotes (as described in points 2, 3 and 6 of Reference 10) and the licensee's commitments to address a number of outstanding comments from OGD.

### 5 OTHER GOVERNMENT DEPARTMENT LIAISON

23. As a part of its consideration of the licensee's request for the changes to its LC 11 arrangements (described previously in this report) ONR has consulted with the following Other Government Departments (OGD) in their roles as relevant competent authorities for this approval. This was in respect of ONR's intention to Approve the revised Site Emergency Plans at Issue 8.1
- Defence Nuclear Safety Regulator (DNSR)
  - Environment Agency (EA)
  - The Hazardous Industries Directorate (HID) of the Health and Safety Executive (HSE).
  - The Ministry of Defence (MoD) Defence Fire and Rescue.
24. HSE HID and MoD Defence Fire and Rescue (References 21 and 22) confirmed that they were content with the revised Site Emergency Plans.
25. However, EA and DNSR had changes they required AWE to make to the Issue 8 documents submitted and AWE duly accommodated some minor changes in the Issue 8.1 documents, i.e. where matters of factual accuracy were concerned and where the changes were so minor that the Issue 8.1 documents did not have to re-enter AWE's due process for re-approval. For all other changes requested by OGD, these agencies reached agreement with AWE that their more substantial requested changes would be accommodated in the future Issue 9 revision to the Site Emergency Plans for AWE Aldermaston and Burghfield (References 11 and 23). The additional future changes, agreed between the OGD and AWE, do not compromise the intent of the Issue 8.1 documents and hence do not present any impediment to ONR Approval of the Issue 8.1 documents as requested by AWE.

### 6 CONCLUSIONS

26. It is concluded that the licensee's revised Issue 8.1 Site Emergency Plans, for AWE Aldermaston and AWE Burghfield, have been demonstrated to ONR's satisfaction by observing exercises. From its sampling of these Issue 8.1 Site Emergency Plans for Aldermaston and Burghfield, there are no outstanding matters from the work conducted by ONR in its consideration of the licensee's request, which would preclude ONR's 'Approval' of the licensee's Issue 8.1 of the Site Emergency Plans for AWE Aldermaston and AWE Burghfield.

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27. ONR is also content with AWE's assessment of organisational change (LC 36), associated with the changes in C & C structures at AWE Aldermaston.
28. Finally, ONR is content that the Issue 8.1 Site Emergency Plans have satisfactorily passed through the licensee's due process.

### **7 RECOMMENDATIONS**

29. It is recommended that 'Approval' Licence Instruments 535 (Burghfield) and 536 (Aldermaston) be issued to approve the substitution of Issue 8.1 of the AWE Aldermaston Site Emergency Plan (AWE/DI/02/02/1000) and Issue 8.1 of the AWE Burghfield Site Emergency Plan (AWE/DI/02/01/1050) for AWE Aldermaston Site Emergency Plan, AWE/DI/02/02/1000, Issue 5 February 2016 and AWE Burghfield Site Emergency Plan AWE/DI/02/01/1050, Issue 5, February 2016. The previous Office for Nuclear Regulation 'Approval' Licence Instruments (No. 532), which permitted the introduction of Issue 5 of the Emergency Plans for Aldermaston and Burghfield, are hence withdrawn.

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### 8 REFERENCES

1. ONR011-050a – “AWE Aldermaston and AWE Burghfield Site Emergency Plans,” 8/11/2019 (CM9 2019/348987)
2. Licence Instrument No. 1 – “Specification that the Licensee Shall Submit to the Executive the Aldermaston Site Emergency Plan for Approval,” NUC/700/51/11/0/0/0-02
3. Licence Instrument No. 532 (AWE Aldermaston and AWE Burghfield), 30/3/2016.
4. AWE/DI/02/02/1000, Issue 5, February 2016 – “AWE Aldermaston Site Emergency Plan,” (CM9 2016/84239)
5. AWE/DI/SRG/02/01/1050, Issue 5, February 2016 – “AWE Burghfield Site Emergency Plan,” (CM9 2016/84245)
6. AWE/DI/02/02/1000, Issue 8.1, October 2019 – “AWE Aldermaston Site Emergency Plan,” (CM9 2019/348987)
7. AWE/DI/SRG/02/01/1050, Issue 8.1, October 2019 – “AWE Burghfield Site Emergency Plan,” (CM9 2019/348987)
8. E-mail – “Draft Site Emergency Plans”, 1/2/2019 (CM9 2019/254481)
9. E-mail – “Site Emergency Plans”, 19/8/2019 (CM9 2019/254270)
10. E-mail - “Site Emergency Plans”, 20/8/19 (CM9 2019/254246)
11. E-mail – “AWE Site Emergency Plans – Governance Evidence”, 5/12/2019 (CM9 2019/361756)
12. EDMS3/80263791/SC058/SRG5, Issue 3, May 2019 – “Organisational Change Assessment Form to Support Implementation of the Command and Control Structure at AWE Aldermaston”, (CM9 2019/373984)
13. E-mail – “Regulatory Correspondence ONR036-092”, 3/9/2019 (CM9 2019/254237)
14. E-mail – “PAR 014,” 6/1/2020 (CM9 2020/0004085)
15. ONR-OFD-CR-17-399, Revision 0 – “Demonstration of AWE Off Site Fire and Rescue Capability,” 3<sup>rd</sup> October 2017 (CM9 2017/374094)
16. ALD 71113N – “Aldermaston Level 1 Demonstration Emergency Exercise 2019,” 25/10/2019 (CM9 2019/311944)
17. 01AAHP-1822962675-347 – “AWE Internal Regulation – Peer Review Report for the AWE Aldermaston and Burghfield Site Emergency Plans (Issue 8.1),” Issue 1, October 2019 (CM9 2019/348977)
18. NSC/3787 – “NSC – Minutes of Meeting 15/18 of the AWE Plc Nuclear Safety Committee Held on 20/11/2018,” Dated 27/11/2018 (CM9 2019/361756)
19. EDMS3/802ABB6B/SL002/057 NSC/3800 – “Site Governance Meeting – Record of Meeting 115 Held on 28<sup>th</sup> November 2018,” (CM9 2019/348977).
20. O1AA1G-1933802637-1583 NSC/4040 – “Site Governance Meeting – Record of Meeting”, SGM 138, 10/10/2019 (CM9 2019/361756)
21. E-mail – “HID Comments on Issue 8 Emergency Arrangements Documents for AWE”, 27/9/2019 (CM9 2019/283943)
22. E-mail – “20190923-HPE-CM:O-S AWE Regulatory Correspondence,” 23/09/2019 (CM9 2019/349504).
23. E-mail – “AWE Aldermaston and Burghfield Site Emergency Plans”, 1/10/19 (CM9 2019/283941)

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