



PROJECT ASSESSMENT REPORT		
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<b>Project:</b>	Implementation of Enabling Works	
<b>Site:</b>	Atomic Weapons Establishment Burghfield	
<b>Title:</b>	Agreement to implement the enabling works associated with surveillance activities in support of existing warhead service life.	
<b>Licence Instrument No:</b> (if applicable)	Agreement LI528	
<b>Nuclear Site Licence No:</b>	78A	
<b>Licence Condition:</b>	LC 22	

**Document Acceptance and Approval for Issue / Publication**

Role	Name	Position	Signature	Date
Author		Inspector		
Reviewer		Principal Inspector		
Accepted by <sup>1</sup>		Superintending Inspector		
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**Revision History**

Revision	Date	Author(s)	Reviewed By	Accepted By	Description of Change
A					1 <sup>st</sup> draft for AUH review
B					2 <sup>nd</sup> draft incorporating AUH comments
0					First accepted issue

<sup>1</sup> Acceptance of the PAR to allow release of LI

<sup>2</sup> Approval is for publication on ONR web-site, after redaction where relevant

<sup>3</sup> Specific guidance for the protective marking of government defence nuclear information under the new Government Security Classification scheme is not yet available. As a result, this information has been protectively marked using the now superseded Government Protective Marking System and it must therefore be protected in line with existing GPMS security requirements.

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**AWE Burghfield Site, Assembly Facility**

**Agreement to implement the enabling works associated with surveillance activities in support of existing warhead service life**

[Redacted]

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## EXECUTIVE SUMMARY

### TITLE

- 1.1 AWE Burghfield - Licence Instrument LI528 - Agreement to implement the enabling works associated with surveillance activities in support of the warhead service life.

### PERMISSION REQUESTED

- 1.2 Atomic Weapons Establishment (AWE) plc has requested Office for Nuclear Regulation's (ONR) Agreement under licence condition 22(1) to implement the enabling works associated with surveillance activities in support of the existing warhead service life at the Burghfield Assembly Facility.

### BACKGROUND

- 1.3 In support of The United Kingdom (UK) Ministry of Defence's (MoD) nuclear weapons programme AWE plc has to implement modifications to the equipment and processes at AWE Burghfield. This work includes prior enabling works and updates to existing procedures, tooling and equipment.
- 1.4 AWE plc wrote to ONR on the 13th August 2014 [1] requesting ONR's agreement to implement the modifications associated with surveillance activities and this was supported by the submission of a modified safety case and associated risk assessment.
- 1.5 AWE plc has complied with its arrangements for the control of modifications required by licence condition 22 and identified the change as Category A hence requiring formal agreement by ONR.
- 1.6 This report records ONR's consideration of the company's submission that covers the implementation of the modification of existing procedures, tooling and equipment, commissioning and operator training.
- 1.7 ONR has established and agreed a two phased approach to the assessment of the safety submissions that will comprise the overall safety submission for the implementation of the service life modifications, of which implementation of the enabling works associated with surveillance activities forms the first phase. ONR will assess AWE's safety submissions for each of the phases and the overall assessment will be dependant on the successful assessment of each phase. This report is concerned with the assessment of the implementation of the enabling works.
- 1.8 ONR has worked jointly and consulted with the MoD's Defence Nuclear Safety Regulator (DNSR) and received DNSR assurance on the acceptability on the nuclear safety aspects of the safety case where appropriate.
- 1.9 AWE has kept the Environment Agency apprised of the proposed modification; however, as there are currently no additional environmental aspects related to this proposed modification, it was considered not necessary to formally consult the EA under the HSE/EA agreement.
- 1.10 Assembly/disassembly operations are subject to an explosives licence previously issued by HSE's Hazardous Industries Directorate (HID). HSE/HID has confirmed there are no additional safety issues from a HID Explosives perspective with the modification.

[REDACTED]

[REDACTED]

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

- 1.11 ONR's consideration of the proposal has included proportionate and targeted assessment of safety documentation, site licence condition compliance inspections and technical progress meetings. Advice and comments have been provided to AWE plc throughout and any technical queries have been closed out through the issue of the final safety documentation.
- 1.12 ONR's permissioning decision has been supported by assessment undertaken by MoD's DNSR and by HSE's HID.

### **MATTERS ARISING FROM ONR'S WORK**

- 1.13 There are no outstanding regulatory issues or concerns in relation to this licence instrument.

### **CONCLUSIONS**

- 1.14 As a result of ONR's sample assessment of AWE's supporting safety documentation for the proposed enabling works, appropriate site interventions and assurances received from DNSR and HSE/HID, coupled with discussions with AWE plc staff, ONR has concluded that the safety documentation provides the justification that the risks associated with the proposed modification have been reduced so far as is reasonably practicable. ONR is content for AWE plc to undertake the proposed enabling works associated with surveillance activities.

### **RECOMMENDATION**

- 1.15 It is recommended that, LI528 agreeing to the implementation of the enabling works associated with surveillance activities in support of the existing warhead service life at the Burghfield Assembly Facility, should be issued to AWE plc.


## LIST OF ABBREVIATIONS

AWE	Atomic Weapons Establishment
DNSR	Defence Nuclear Safety Regulator
EA	Environment Agency
FMF	Facility Modification Form
HID	Hazardous Industries Directorate
HOW2	(Office for Nuclear Regulation) Business Management System
HSE	The Health and Safety Executive
LI	Licence Instrument
MoD	Ministry of Defence
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report
PRS	Periodic Review of Safety
SAP	Safety Assessment Principle(s) (HSE)
SCR	Safety Commissioning Report



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[REDACTED]

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## 1. PERMISSION REQUESTED

1.16 AWE plc has requested ONR's Agreement to implement the enabling works associated with surveillance activities in support of the existing warhead service life at the Burghfield Assembly Facility.

## 2. BACKGROUND

1.17 The United Kingdom (UK) Ministry of Defence (MoD) and AWE plc have decided to implement the existing warhead service life modifications. In order to do so, AWE plc has found it necessary to implement prior enabling works, which have resulted in the need to modify existing procedures, tooling and equipment.

1.18 AWE plc wrote to ONR on the 13th August 2014 [1] requesting ONR's agreement to implement the enabling works associated with surveillance activities in support of the existing warhead service life at the AWE Burghfield Assembly Facility. This was supported by the submission of the modified safety case reference Burghfield Assembly Facility Safety Case. EDMS1/800F9E05/A/LS/SC0114, Issue 2, December 2009 [2] and associated Risk Assessment EDMS3/801FD946/B/LS/SC0700, Issue 1, March 2014 [3].

1.19 AWE plc has complied with its arrangements for the control of modifications required by licence condition 22 and identified the change as Category A hence requiring formal agreement by ONR.

1.20 This PAR is to record ONR's consideration of the Assembly Facility's modified safety case submission made to ONR that covers the implementation of the enabling works associated with the surveillance activities in support of existing warhead service life. These comprise the modification of existing procedures, tooling and equipment, commissioning and operator training.

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

1.21 The process employed by ONR in carrying out its permissioning activities is defined in ONR procedures [4]. As in all aspects of its regulatory activities, ONR employs a sampling regime in the assessment of safety cases. Specialist Inspectors, where necessary, have applied appropriate national and international standards, the appropriate HSE Safety Assessment Principles [5] and ONR Technical Assessment Guides [6]. The findings presented in this report represent the output from assessments of the safety case submission and the associated underpinning documentation.

1.22 ONR's regulation of the modifications has been in accordance with the ONR/DNSR/HID Integrated Intervention Strategy for the Weapons sub-programme. Consideration of the application has included proportionate and targeted assessment of safety documentation, site licence condition compliance inspections, and technical meetings with AWE plc's Assembly Facility staff.

1.23 The scope for the assessment and inspection work carried out by ONR in consideration of this request, included a sample assessment and inspection of the improvements to existing procedures, tooling and equipment, commissioning and operator training that form the enabling works.

- [REDACTED]
- [REDACTED]
- 1.24 This report summarises the findings from ONR's assessment of the Assembly Facility's modified safety case associated with enabling works for the existing warhead service life modifications. The associated licence instrument forms ONR's formal response to AWE plc's application.
- 1.25 In line with normal regulatory arrangements, ONR has consulted with DNSR, HID and the EA before making a decision on the Assembly Facility's modified safety case and associated documentation.

#### **4. MATTERS ARISING FROM ONR'S WORK**

- 1.26 Following the targeted assessments of the safety documentation, site licence condition compliance inspections and attendance at progress meetings [7] [8] [9] [10] [11] [12], the ONR site inspectors concluded [13] [14] [15] [16] and [17] that the enabling works in the facility have been implemented satisfactorily. There are no matters arising.
- 1.27 The ONR Site Inspectors have no objections to the implementation of the enabling works associated with the surveillance activities in support of existing warhead service life within the Assembly Facility at Burghfield and recommend the issue of the LI.

#### **5. HID and DNSR Input to the Assessment**

- 1.28 DNSR's vires whilst considering the phases of the safety submissions concerned with the warhead service life modifications are dominant relative to the vires of ONR and therefore the scope the DNSR input to the assessment is proportionate to that dominance.
- 1.29 DNSR carried out assessment and inspection work in consideration of this request covering modified procedures, tooling and equipment related to the enabling works required for the surveillance activities in support of existing warhead service life. It has been confirmed [18] that they have no objections to the issue of the associated LI.
- 1.30 HID has also confirmed [19] that there are no issues from a HID Explosives perspective with the modification and therefore has no objections to the issue of the LI.
- 1.31 EA has been made aware of the company's proposals and application for a licence instrument but, as there are no direct implications for the management of radioactive wastes or discharges to the environment, I do not consider formal consultation appropriate.

[REDACTED]

[REDACTED]

## 6. CONCLUSIONS

- 1.32 As a result of ONR's sample assessment of AWE's supporting documentation for the implementation of the enabling works associated with the surveillance activities in support of existing warhead service life, appropriate site interventions and assurances received from DNSR and HID, coupled with discussions with AWE plc staff, ONR has concluded that the safety documentation provides the justification that the risks associated with the modifications have been reduced as far as is reasonably practicable and ONR are content for AWE plc to implement the specified modifications.
- 1.33 It is the opinion of the ONR Site Inspectors that there are no matters that should prevent the issue of the LI agreeing to implement the enabling works associated with the existing warhead service life modifications at the Burghfield Assembly Facility.

## 7. RECOMMENDATIONS

- 1.34 It is recommended that LI528 agreeing to the implementation of the enabling works associated with the surveillance activities in support of existing warhead service life at the Burghfield Assembly Facility, should be issued to AWE plc.

## 8. REFERENCES

1. AWE request for agreement to implement the enabling works associated with the existing warhead service life modifications at the AWE Burghfield Assembly Facility ONR 211-086 R 13 August 2014 TRIM 2014/305189
2. Burghfield Assembly Facility Safety Case. EDMS1/800F9E05/A/LS/SC0114, Issue 2
3. Burghfield Assembly Facility Risk Assessment EDMS3/801FD946/B/LS/SC0700, Issue 1, March 2014.
4. ONR How2 Business Management System. Purpose and Scope of Permissioning. NS-PER-GD-014 July 2014 <http://www.onr.org.uk/operational/assessment/index.htm>.
5. Safety Assessment Principles for Nuclear Facilities. 2006 Edition Revision 1. HSE. February 2008. <http://www.onr.org.uk/saps/index.htm>
6. Office for Nuclear Regulation (ONR) Permissioning inspection - Technical assessment guides. [http://www.onr.org.uk/operational/tech\\_asst\\_guides/index.htm](http://www.onr.org.uk/operational/tech_asst_guides/index.htm).
7. ONR - AWE -IR-2013 -84 - AWE Assembly and Fissile Materials Technology Centre - Compliance Inspection - 9 - 10 October 2013 and 14 - 17 October 2013. TRIM 2013/396625
8. ONR - AWE - IR - 2013 - 110 – AWE Assembly Technology Centre – Compliance Inspection – December 2013. TRIM 2014/10002
9. ONR - AWE - IR - 2013 - 117 – AWE Assembly Technology Centre - Compliance Inspection – 13 - 16 January 2014. TRIM 2014/47586
10. ONR - AWE -CR - 2013- 124 - Commencement of Assembly Facility Operations – Background Meeting -6 February 2014. TRIM 2014/76807
11. ONR - AWE - IR - 2013 - 135 - AWE Assembly Technology Centre - Compliance Inspection – 10 -13 February 2014. TRIM 2014/86610
12. ONR - AWE - 2013 - IR - 146 - AWE Assembly Technology Centre - Compliance Inspection – 10 – 13 March 2014. TRIM 2014/121962
13. ONR - AWE - IR - 2013 - 147 – AWE Assembly Technology Centre - Compliance Inspection - 18 - 19 March 2014. TRIM 2014/123774
14. DEF - IR – 2014 – 101 – AWE Assembly Technology Centre - Compliance Inspection - 14 - 17 July 2014. TRIM 2014/267751
15. DEF - IR – 2014 – 108 – Mechanical Interventions – 14 - 17 July 2014 TRIM 2014/278598
16. DEF- IR – 2014 – 125 – Cargo Doors Abnormal Event - 6 August 2014 TRIM 2014/304326
17. DEF - CR – 2014 – 121 – Burghfield Site – Assembly Facility – Implementation of Safety Improvements - 14 August 2014. TRIM 2014/304586
18. DNSR Letter of no objection to the issue of a licence instrument for the implementation of the enabling works associated with the existing warhead service life modifications at the AWE Burghfield Assembly Facility. TRIM 2014/318802

- [REDACTED]
- [REDACTED]
19. HID Letter of no objection to the issue of a licence instrument for the implementation of the enabling works associated with the existing warhead service life modifications at the AWE Burghfield Assembly Facility. TRIM 2014/130097