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Unit 3b Division 3 PROJECT ASSESSMENT REPORT No: 020/2007

HEALTH AND SAFETY EXECUTIVE

HM NUCLEAR INSTALLATIONS INSPECTORATE

PROJECT: Agreement to permission [REDACTED]  
[REDACTED] at Burghfield.

SITE: AWE Burghfield

CONSENT/APPROVAL NO: N/A

LICENCE INSTRUMENT No: [REDACTED]

LICENCE and CONDITION NOs: 78, LC 22(1)

AUTHOR: [REDACTED] SIGNED: .....Date.....

APPROVED: [REDACTED] SIGNED: .....Date.....

Distribution:

[REDACTED]  
[REDACTED]  
[REDACTED]

Folder: 4.4.1.356

SUMMARY

In 2002 AWE submitted the Trident Modified Disassembly<sup>1</sup> Safety Case (TMDSC). NII had concerns over the methodology and asked for a revised risk assessment (RA) to be carried out. Licence Instrument [REDACTED] was issued to allow limited [REDACTED] in the meantime and with the restriction of [REDACTED] in Gravel Gerties. In mid 2003 a further LI [REDACTED] was granted allowing further limited [REDACTED] with the same constraint. At this time NII understood that the RA was continuing to be developed. In March 2004 NII reiterated in writing that a new RA was necessary and that further Lis would only be granted when adequate progress had been demonstrated. AWE programmed the RA for completion in April 2006, however, it was not completed and forecasts at the time indicated that it would not be completed until April 2007. On the basis that sufficient progress had not been made toward completion of the RA, and the ongoing PRS had indicated a number of shortfalls to the facility and plant, LI [REDACTED] was issued in August 2006 to allow AWE to [REDACTED] already held at AWE(B), but only following written confirmation from DNSR that the [REDACTED] were necessary in support of the UK Strategic Deterrent. The AWE(B) letter requesting LI [REDACTED] was annexed by a Schedule of Deliverables (SD), which was agreed by NII prior to the granting of the LI. This schedule required AWE(B) to introduce some risk-reducing measures in the short term, including the development of that part of the TMDSC which included the significant contributors to the overall risk of disassembly operations, before any further Lis would be granted.

In [REDACTED] AWE(B) sought agreement to [REDACTED] but not [REDACTED] a number of units. DNSR confirmed by letter that an [REDACTED] of a minimum of [REDACTED] was necessary in support of the UK Strategic Nuclear Deterrent. Following site visits and examination of an "evidence" file supplied by AWE, NII granted LI [REDACTED] to permit the [REDACTED] of [REDACTED]

In [REDACTED] AWE asked for permission to [REDACTED] a request which was supported by NWR as being necessary in support of the UK strategic deterrent. On the basis of a number of assurances provided in the letter of request, NII granted LI number [REDACTED] to permit this work. LI [REDACTED] informed AWE that further Lis would be necessary to permission all [REDACTED] and [REDACTED] or [REDACTED] of [REDACTED] and [REDACTED] units.

AWE applied in [REDACTED] for permission to [REDACTED] a [REDACTED] and [REDACTED] upon a need to support the UK Strategic Deterrent and on progress so far in achieving completion of the deliverables offered previously and against assurances provided in the December request letter.

<sup>1</sup> Whilst AWE(B) carries out both assembly and disassembly of Trident Warheads it is generally accepted that [REDACTED]

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AWE's assertions were "tested" by means of inspections and discussions and found to be accurate and on this basis it was considered appropriate to grant LI [REDACTED]

In [REDACTED] AWE applied for permission to [REDACTED] and [REDACTED]. One of the key safety improvements at AWE(B) identified by the PRS is the replacement of the [REDACTED] by an alternative process which does not involve [REDACTED]. NII wishes to see this modification implemented as soon as reasonably practicable. On the basis of progress made with the [REDACTED] replacement as determined by sampling a supplied evidence file to demonstrate progress, NII granted permission for the [REDACTED] and [REDACTED] by means of LI [REDACTED]

AWE has now asked for early agreement to the [REDACTED] of [REDACTED] which were originally planned for September 2007 (Reference 1). I have considered the benefits and disbenefits of agreeing to this and I recommend that LI [REDACTED] should be issued to permission these activities.

**INTRODUCTION**

The continuing use of Trident as the deterrent beyond the initial design lifetime is underwritten by the ability to maintain the serviceability of the existing stockpile. To achieve this, AWE needs to carry out disassembly and examination of units to maintain stockpile confidence and capability. Units need to be broken down for stockpile surveillance and other related reasons and to maintain Government commitments on warhead numbers.

A modified process for Trident disassembly at AWE(B) has been developed, which has incorporated a number of improvements compared to the original Trident disassembly process.

AWE has been using the Trident Modified Disassembly Process (TMDP) under the previous [REDACTED] limited agreements LI Nos. [REDACTED] and [REDACTED]

Because of the significant number of modifications being undertaken to address shortfalls identified during the PRS process, AWE has been informed that until these are completed and the safety case revised, it will be required to apply for permission to [REDACTED] and [REDACTED]

These permissions will be granted on the basis of satisfactory progress against a schedule of agreed deliverables aimed at ensuring adequate progress with remediation works.

AWE has now requested that NII agrees to the [REDACTED] of [REDACTED]. This PAR provides a record of the basis upon which the regulatory decision has been reached. The basis of the arguments presented in the previous Project Assessment Reports PAR 02/05 (dated [REDACTED]) PAR 74/2003 (dated [REDACTED]) PAR 25/2006 (dated [REDACTED])

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PAR 33/2006 (dated ) PAR 40/2006 (dated )  
PAR 46/2006 (issued ) and PAR 14/2007  
(issued ) provides an auditable link to the current position.

The Nuclear Weapon Regulator (NWR) has informed NII that the units which AWE has requested permission to are necessary in support of the UK Strategic Defence (Reference 2). This note is saved in TRIM folder 4.4.1.356.

PERMISSIONING STRATEGY FOR AWE BURGHFIELD

In order to secure ongoing improvements to the safety case, the processes and plant at AWE Burghfield, a strategy of permissioning has been adopted by NII, under which AWE is permitted only to undertake limited defined operational activities. Following such activities and prior to Agreement of the next phase of operations, reviews take place to determine that progress has been made against identified issues. A number of licence instruments have been used, and will continue to be used, to monitor progress with the PRS remedial works and continuing development of the safety case through until at least the end of September 2007. Briefly the licence instruments, in place and planned, cover:

LI number	Proposed activity	Main deliverable
LI	Permissioning of	Progress against identified deliverables including civil inspections, mechanical inspections and the risk assessment
LI	Permissioning of further	Progress against identified deliverables including civil inspections and mechanical inspections
LI	Permissioning of the use of	Agreement of a programme for the replacement of the and progress against this activity
LI (This LI)	Permissioning of further	Progress against PRS remedial works
LI 507 (A future LI)	Permissioning of and	Progress against PRS remedial works and definition and programme of incomplete items.

BASIS FOR DECISION

NII has been presented with a programme for completion of shortfall remediation work which shows that a number of significant items will not be completed by the "decision date" in September 2007. Some of these work packages are for facilities which will not be used until after the modifications

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are complete. This is therefore of little interest to NII. For others however there are shortfalls against plant that are expected to continue in operation significantly beyond September. NII informed AWE that it was concerned about these and wants the planned dates brought forward. AWE subsequently responded by reviewing its operational programme and informed NII that a greater window in the operational programme would be required to enable some of the work packages to be completed sooner, without compromising the weapons programme. NII was advised that by bringing [REDACTED] planned for [REDACTED] forward to [REDACTED]; the window available to complete PRS shortfalls will increase by a total of 20 days. This will allow the following work packages to be brought forward:

- [REDACTED] – install pressure relief valve or slam shut valve
- [REDACTED] – implement recommendations of the suitability and sufficiency assessment
- [REDACTED] – provide Castell key system for X-Ray facility
- [REDACTED] – install surge protection for Schenk machine
- [REDACTED] – replace lighting system including UPS and provide alarm for failure of emergency lighting
- [REDACTED] – repair Gunite cap
- [REDACTED] – replace lighting system including UPS and provide alarm for failure of emergency lighting
- [REDACTED] – repair Gunite cap
- [REDACTED] – relocate gas cylinder outside room.

Timescales for completion of this work are contained in Reference 3. Although some of these work packages still extend beyond September 2007, the timescales for completion of the work are acceptable to NII, and significantly sooner than those contained in the original programme.

In addition to the above, AWE has agreed (Reference 1) to provide additional information by the beginning of September prior to a future LI being issued for [REDACTED]. This includes the following:

- A definition of the remediation work package for all the remaining shortfalls, along with the associated implementation timescales and the criteria by which the effectiveness will be judged.
- For remediation which is planned to be completed after September 2007 and for which the plant is still needed for routine operations, AWE will provide a written justification demonstrating that risks have been reduced ALARP for the period until the remediation is complete.
- Civil inspection contracts, as highlighted in Reference 5, will have been let and the investigative work will be complete by September 2007.
- The AWE(B) anemometer equipment will be registered as an EMIT item and all associated documentation will be in place by September 2007.

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- All shortfalls being addressed by the Facility will be in place by September with the exception of those identified in Reference 4.

### CONSULTATION WITH OTHER STAKEHOLDERS

NII has consulted with DNSR's NWR to confirm that the requested operations are necessary in support of the UK strategic defence programme.

NII has not consulted EA in relation to this LI request since there are no environmental issues in relation to the proposed activities.

NII has not consulted any other parts of HSE such as FOD or HID since NII is the lead HSE regulator for the AWE(B) licensed site and there are no issues pertinent to other parts of HSE associated with the proposed activities.

### CONCLUSIONS

AWE appears to be making satisfactory progress in terms of the PRS shortfall remediation and the above proposals will allow some acceleration of timescales without adversely affecting the weapons programme.

DNSR has confirmed the need to undertake the [REDACTED] operations specified in the AWE LI request letter, in support of the UK strategic defence programme.

### RECOMMENDATIONS

It is recommended that:

Nii should issue Licence instrument No. [REDACTED] agreeing to the [REDACTED] of [REDACTED]

NII should not issue further Licence Instruments in relation to [REDACTED] and [REDACTED] operations unless AWE provides continuing evidence that progress with the [REDACTED] replacement and PRS remediation work is being undertaken as fast as reasonably practicable.

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REFERENCES

No.	Description	Identification	TRIM location
1	Licensee's request letter	EDMS1/8011332E/B/LS/N0400 – NII 2674N, dated [REDACTED]	5.1.3.365
2	Confirmation from DNSR of the need for [REDACTED]	E-mail – [REDACTED] to [REDACTED] dated [REDACTED]	4.4.1.356
3	Programme for completion of specific PRS shortfalls	Fax from [REDACTED] to [REDACTED] dated 23 May 2007; EDMS1/8010F3AE/B/LS/FM110D Issue 1.	4.4.1.356
4	Burghfield Assembly Facility – Update on Closure of PRS Shortfalls	EDMS1/801063B6/B/LS/N0400 – NII2625N, dated 26 March 2007.	4.4.1.323
5	Burghfield PRS – Civil Engineering Progress	NII letter BUR 77194R, dated 23 May 2007	5.1.3.367
-	Permissioning project report	PAR 020 - 2007	4.4.1.356
-	Licence instrument checksheet	N/A	4.4.2.1654
-	Licence instrument	LI [REDACTED] BUR 77197 N	4.4.2.1654 5.1.3.367