



**Harwell Emergency Arrangements  
Approval of Revised Harwell Site Emergency Plan Issue 7**

Project Assessment Report ONR-SDFW-PAR-18-009  
Revision 1  
19 October 2018

© Office for Nuclear Regulation, 2018

If you wish to reuse this information visit [www.onr.org.uk/copyright](http://www.onr.org.uk/copyright) for details.

Published 11/18

*For published documents, the electronic copy on the ONR website remains the most current publicly available version and copying or printing renders this document uncontrolled.*

## EXECUTIVE SUMMARY

### Approval of Revised Harwell Emergency Arrangements

#### Permission Requested

Magnox Limited (the licensee) has written to the Office for Nuclear Regulation (ONR) requesting Approval under Licence Condition 11(3) for implementation of a revised site emergency plan and withdrawal of approval for the extant emergency plan for Harwell.

#### Background

In April 2015, Harwell was relicensed to Magnox Limited. Since relicensing, Magnox Limited has started to introduce consistent processes and working arrangements across its 12 sites.

Magnox Limited conducted a Hazard Identification and Risk Evaluation (HIRE) and submitted a report of assessment (RoA) to ONR in 2013. A subsequent declaration in 2016 from Magnox Limited stated there were no changes in circumstances to that earlier assessment. Magnox Limited concluded that, because of the reduction in hazards due to decommissioning operations at the Harwell site, there are no longer any accidents which would result in a reasonably foreseeable radiation emergency as defined in REPPiR. Through its independent assessment and review, ONR concurred with Magnox Limited's conclusions that a radiation emergency, as defined in REPPiR, is no longer reasonably foreseeable from operations at the Harwell site.

The licensee has taken this opportunity to re-write its emergency plan into the Magnox Limited generic format for sites without a Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) off-site emergency plan and remove all references to off-site planning accordingly.

Magnox Limited has added additional references to the Magnox Limited Central Support Cell into the Harwell emergency arrangements and also added the new role of Emergency Services Liaison Officer including its function, as well as references to extant roles such as the out-of-building local incident controller and on-call facility duty officers.

As required by LC11 (3), the licensee has written to ONR to request approval of its revised emergency arrangements that are set out in the emergency plan and withdrawal of approval for the extant emergency plan.

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

ONR has assessed the differences between the proposed new plan and the existing approved plan. The principal changes to the licensee's emergency plan are: the removal of references to the REPPiR off-site emergency plan; making reference to the Magnox Ltd Central Support Cell into the Harwell emergency arrangements; adding additional roles such as the Emergency Services Liaison Officer including its function, as well as explicit reference to extant roles such as the out-of-building local incident controller and on-call facility duty officers. Some minor typographical amendments have also been made. It is our opinion these changes are appropriate and have been adequately implemented.

The licensee has demonstrated the proposed changes to ONR's satisfaction during a demonstration exercise of the emergency arrangements.

ONR has confirmed that the licensee's proposals meet the requirements of our guidance.

#### Matters arising from ONR's work

There are no matters arising from this project assessment report.

## **Conclusions**

ONR is satisfied that the changes in the revised emergency plan are appropriate for a site which no longer meets the REPPiR requirement for an off-site emergency plan, and reference to the Magnox Limited Central Support Cell into the Harwell emergency arrangements are appropriate. The licensee has demonstrated the proposed changes to ONR's satisfaction during a demonstration exercise of the emergency arrangements in July 2018.

Finally, ONR considers that the proposed emergency plan will provide suitable and sufficient detail to enable the licensee to safely deal with an on-site emergency should the need arise.

## **Recommendation**

It is recommended that licence instrument number 505 be issued to approve the revised Magnox Limited Harwell emergency plan Issue 7. This licence instrument will also withdraw approval of the existing emergency plan Issue 5.

## LIST OF ABBREVIATIONS

ALARP	As low as reasonably practicable
BSL	Basic Safety level (in SAPs)
BSO	Basic Safety Objective (in SAPs)
CNS	Civil Nuclear Security (ONR)
HOW2	(Office for Nuclear Regulation) Business Management System
HSE	The Health and Safety Executive
IAEA	The International Atomic Energy Agency
IRS	Incident Response Service
MxL	Magnox Limited
NDA	Nuclear Decommissioning Authority
NOFA	Nuclear Occupational First Aider
ONR	Office for Nuclear Regulation
PCER	Pre-construction Environment Report
PCSR	Pre-construction Safety Report
PSA	Probabilistic Safety Analysis
PSR	Preliminary Safety Report
RGP	Relevant Good Practice
SAP	Safety Assessment Principle(s)
SFAIRP	So far as is reasonably practicable
SSC	Structure, System and Component
TIG	Technical Inspection Guide (ONR)
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 .....	7
4	MATTERS ARISING FROM ONR'S WORK.....	9
5	CONCLUSIONS .....	9
6	RECOMMENDATIONS.....	9
7	REFERENCES .....	10

## **1 PERMISSION REQUESTED**

1. Magnox Limited (The Licensee) has requested ONR's 'Approval' under Licence Condition 11(3) for its proposed changes to the Harwell site emergency plan and withdrawal of approval for the extant emergency plan [Ref 1]. This revision is documented in issue 7 of the plan [Ref 2].
2. The licensee currently has an emergency plan [Ref 3], which is at issue 5 (N.B. issue 6 of the emergency plan was issued by Magnox Limited but not Approved by ONR at the request of Magnox Limited due to a review of the Hazard Identification and Risk Evaluation (HIRE) for Harwell). Licence Condition (LC) 11(3) requires the licensee (in this case, Magnox Limited) to ensure that no alteration or amendment is made to an approved emergency plan unless the Office for Nuclear Regulation (ONR) approves that alteration or amendment. This report presents the basis for ONR approval of the licensee's proposed new arrangements.
3. The proposed changes to the plan have been through the licensee's due process and have been considered by its Nuclear Safety Committee [Ref 4] [Ref 5] [Ref 6] and reviewed and endorsed at the Magnox Limited Southern Site's Safety Working Party [Ref 7].

## **2 BACKGROUND**

4. In April 2015, Harwell was relicensed to Magnox Limited. Since relicensing, Magnox Limited has started to introduce consistent processes and working arrangements across its 12 sites.
5. Magnox Limited conducted a HIRE and submitted a report of assessment (RoA) to ONR in 2013. A subsequent declaration in 2016 from Magnox Limited stated there were no changes in circumstances to that earlier assessment. Magnox Limited concluded that, because of the reduction in hazards due to decommissioning operations at the Harwell site, there are no longer any accidents which would result in a reasonably foreseeable radiation emergency as defined in REPPiR. Through its independent assessment and review, ONR concurred with Magnox Limited's conclusions that a radiation emergency, as defined in REPPiR, is no longer reasonably foreseeable from operations at the Harwell site.
6. The licensee has taken this opportunity to re-write its emergency plan into the Magnox Limited generic format for sites without a Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) off-site emergency plan and remove all references to off-site planning accordingly.
7. Magnox Limited has added additional references to the Magnox Limited Central Support Cell into the Harwell emergency arrangements and also added the new role of Emergency Services Liaison Officer including its function, as well as explicit reference to extant roles such as the out-of-building local incident controller and on-call facility duty officers.
8. As required by LC11 (3), the licensee has written to ONR to request approval of its revised emergency arrangements that are set out in the emergency plan [Ref 1].

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

9. In our assessment of the proposed emergency plan, ONR has considered the differences between the extant [Ref 3] and proposed plans [Ref 2].

10. The licensee has demonstrated the proposed changes to ONR's satisfaction during a demonstration exercise of the emergency arrangements during a recent Level 1 emergency demonstration exercise [REDACTED] [Ref 8].
11. ONR has confirmed that the proposed plan is compliant with the requirements of our own guidance [Ref 9] [Ref 10].

### **3.1 KEY CHANGES TO EXISTING ARRANGEMENTS**

12. The licensee has taken this opportunity to re-write its emergency plan into the Magnox Limited generic format that has been adopted by Magnox reactor sites for sites without a Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) off-site emergency plan. ONR has considered emergency plan revisions for other Magnox reactor sites and is content with this generic emergency plan template [Ref 11]. ONR has checked the licensee's proposed emergency plan against the requirements of the Safety Assessment Principle (SAP) AM.1 [Ref 9] and Technical Inspection Guide (TIG) 11 [Ref 10] and considers that it meets the requirements of those documents.
13. All references to off-site planning have been removed but the on-site arrangements remain unchanged from the previous approved arrangements with the exception of the additions to the arrangements below.
14. Magnox Limited has added additional references to the Magnox Limited Central Support Cell into the Harwell emergency arrangements.
15. Reference to an Emergency Services Liaison Officer has been added to the arrangements including its role, responsibilities, authority and accountability and demonstrated to the satisfaction of ONR during exercise [REDACTED] [Ref 12]. Additional explicit references to extant roles such as the out-of-building local incident controller, demonstrated to the satisfaction of ONR during exercise [REDACTED], and on-call facility duty officers, demonstrated to the satisfaction of ONR during exercise [REDACTED], have also been made. It is ONR's opinion these roles add more resilience to the current arrangements.
16. ONR therefore considers the licensee's proposed changes to be acceptable and that the arrangements, as expressed in that plan, to be adequate.

### **3.2 DEMONSTRATION OF PROPOSED EMERGENCY PLAN**

17. The licensee has demonstrated the proposed changes to ONR's satisfaction during exercise [REDACTED] on 11 July 2018.
18. Whilst ONR considered that the licensee had demonstrated that it could deal with an emergency a number of minor improvements were recommended.

### **3.3 SUMMARY**

19. Overall ONR considers the organisational changes proposed by the licensee to be appropriate and that the licensee has demonstrated that its new emergency arrangements are effective. We consider that the revision of the emergency plan into a common Magnox Limited format has produced a suitable document, and see no reason to withhold approval or request any changes to this plan. It reflects our own guidance, and does so in a way that makes Magnox Limited's response to an accident or emergency at Harwell easy to understand.

### **3.4 LEGAL ASPECTS**



20. Licence Instrument (LI) 505 [Ref 13] has been drafted in response to the licensee's request for Approvals under Licence Condition 11(3) of the revision to the emergency plan. This LI is one of the standard formats given within ONR procedures and so it does not require review by the Government Legal Department.

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

21. There are no matters arising from this project assessment report.

#### **5 CONCLUSIONS**

22. ONR is satisfied that the revised emergency plan appropriately removes references to off-site emergency planning in accordance with the REPPIR requirements and that the arrangements for on-site emergency planning remain unchanged expect for a few improvements such as: reference to the Magnox Ltd Central Support Cell into the Harwell emergency arrangements; adding the additional role of an Emergency Services Liaison Officer; making explicit references to extant roles such as the out-of-building local incident controller and on-call facility duty officers. It is ONR's opinion these changes add more resilience to the current arrangements.
23. The licensee has demonstrated the proposed changes to ONR's satisfaction during a demonstration exercise of the emergency arrangements in July 2018.
24. Finally, ONR considers that the proposed emergency plan will provide suitable and sufficient detail to enable the licensee to safely deal with an on-site emergency should the need arise.

#### **6 RECOMMENDATIONS**

25. It is recommended that:
- Licence Instrument 505 is issued under site licence number 101 to approve, Harwell Site Emergency Plan, HAR-EMPLAN, Issue 7, dated 15 October 2018.
  - ONR withdraws Licence Instrument 504 issued under site licence number 101 for the approval of Harwell Site Emergency Plan, HAR-EMPLAN, Issue 5, dated 12 July 2016.

## 7 REFERENCES

1. Magnox/HAR-50205Y, Letter from Magnox Ltd Harwell, Request for Approval of the revised Harwell Site Emergency Plan, 15 October 2018. (TRIM reference 2018/339619).
2. HAR-EMPLAN, Magnox Ltd, Harwell Site Emergency Plan Issue 7, dated 15 October 2018. (TRIM reference 2018/339620).
3. HAR-EMPLAN, Magnox Ltd, Harwell Site Emergency Plan Issue 5, dated 12 July 2016. (TRIM reference 2018/187692).
4. Minutes of the Joint Meeting of the Magnox Limited Berkeley, Bradwell, Chapelcross, Dungeness A, Harwell, Hinkley Point A, Hunterston A, Sizewell, Trawsfynydd and Winfrith Nuclear Safety Committee - Meeting held on 7 December 2017 (TRIM reference 2018/187702).
5. Minutes of the Joint Meeting of the Magnox Limited Berkeley, Bradwell, Chapelcross, Dungeness A, Harwell, Hinkley Point A, Hunterston A, Sizewell, Trawsfynydd and Winfrith Nuclear Safety Committee - Meeting held on 28 February 2018 (TRIM reference 2018/187704).
6. Minutes of the Joint Meeting of the Magnox Limited Berkeley, Bradwell, Chapelcross, Dungeness A, Harwell, Hinkley Point A, Hunterston A, Sizewell, Trawsfynydd and Winfrith Nuclear Safety Committee - Meeting held on 24 July 2018 (TRIM reference 2018/272449).
7. Harwell & Winfrith Safety Working Party Minutes – Meeting Reference SWP(17)M07 held on 26 July 2017 (TRIM reference 2018/187706).
8. ONR-SDFW-IR-18-60- Harwell LC11 Exercise [REDACTED] - Level 1 Emergency Exercise 11 July 2018 (TRIM reference 2018/224888).
9. Safety Assessment Principles – 2014 edition (Revision 0, November 2014).  
[www.onr.org.uk/saps](http://www.onr.org.uk/saps).
10. NS-INSP-GD-011 Revision 5 LC 11 – Emergency Arrangements. July 2017  
[www.onr.org.uk/operational/tech\\_insp\\_guides/ns-insp-gd-011.pdf](http://www.onr.org.uk/operational/tech_insp_guides/ns-insp-gd-011.pdf).
11. Magnox Ltd Template F-850 (S-901 Part 2) Generic Emergency Plan Template (Sites with no Off-site Plan Phase 1) (TRIM reference 2018/208229).
12. ONR-SDFW-IR-16-204 - Harwell Emergency Demonstration Exercise - 27-29 March 2017 (TRIM reference 2017/133318).
13. Site Licence No: 101, Licence Instrument No: 505. August 2018. Nuclear Installations Act 1965 (As Amended). Approval Granted under Condition 11(3) of Schedule 2 attached to Nuclear Site Licence No: 101. Harwell. (TRIM 2018/187714).