



**Oldbury Emergency Arrangements**

**Request for ONR Approval under Licence Condition 11 (3) of Oldbury Emergency Arrangements**

Project Assessment Report ONR-SDFW-PAR-18-048  
Revision 0  
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## EXECUTIVE SUMMARY

This report presents the findings of the Office for Nuclear Regulation's (ONR) consideration of Magnox Limited's (MxL) request for an Approval to amend or alter the approved Oldbury emergency plan.

### Permission Requested

MxL, the licensee for Oldbury, has written to ONR requesting an Approval under Licence Condition (LC) 11, emergency arrangements, for amendment to the site's Emergency Plan.

### Background

LC 11, emergency arrangements, requires the licensee to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects. In order to comply with this requirement the licensee issues an Emergency Plan.

ONR has previously approved the Oldbury Emergency Plan using primary powers under LC 11(2). To comply with LC 11(3) the licensee needs to obtain ONR Approval for alteration or amendment to Approved arrangements.

Oldbury ceased power generation in 2012 and the de-fuelling of the reactors was completed in 2016, thereby removing most of the nuclear hazard from the site. The site is now in the decommissioning stage of its lifecycle.

MxL is requesting ONR's Approval to implement operational shift transition at Oldbury. It is proposing to cease shift operations on site, which involves the complete withdrawal of shift personnel during silent hours. Continuous on-site safety and security will be provided by an enhanced security guard presence during silent hours. Overall, MxL judges that the proposal has low radiological consequences by virtue of the remaining low nuclear hazard on site.

### Assessment and inspection work carried out by the Office for Nuclear Regulation in consideration of this request

ONR has carried out a programme of work that includes inspection of the licensee's proposal to ensure it is consistent with the requirements of LC 11; this included ONR's observation of a demonstration of the proposed amended arrangements.

### Matters arising from the Office for Nuclear Regulation's work

There are no unresolved issues remaining from ONR's assessment and inspection work.

### Conclusions

In ONR's opinion, the licensee's proposed alteration or amendment of the Oldbury emergency arrangements is adequate to satisfy the requirements of LC 11. In formulating this opinion, we have taken the following into account:

- ONR's interactions with the licensee on the proposed new arrangements, and an adequate demonstration of the proposed new arrangements.
- ONR's satisfaction with the licensee's submissions such that the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPiR) off-site emergency area for the purposes of public protection no longer applies;
- The proposal has followed the licensee's due process and is supported by its Nuclear Safety Committee;
- A positive outcome from a MxL executive-led readiness review;
- Confirmation that the change has no impact upon nuclear safety; and

- The decision is consistent with those made at similar defueled Magnox sites.

## **Recommendations**

It is recommended that a person with delegated authority within ONR:

- Accepts the regulatory judgements in this report that justify issuing Licence Instrument 558, an Approval;
- Approves this report for publication after redaction as appropriate;
- Signs Licence Instrument 558 giving effect to ONR's Approval of the proposed amendments to the Oldbury Emergency Plan under LC 11(3).

## LIST OF ABBREVIATIONS

HIRE	Hazard Identification and Risk Evaluation
LC	Licence Condition
MxL	Magnox Limited
ONR	Office for Nuclear Regulation
OST	Operational Shift Transition
REPPIR	Radiation (Emergency Preparedness and Public Information) Regulations
RoA	Report of Assessment

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## 1 PERMISSION REQUESTED

1. MxL, the licensee for Oldbury, has written to ONR requesting Approval under LC 11 (3) (Ref. 1), emergency arrangements, of alteration or amendment to the site's approved emergency plan. This report presents the findings of the ONR's consideration of MxL's request.

## 2 BACKGROUND

2. LC 11, emergency arrangements, requires the licensee to make and implement adequate arrangement for dealing with any accident or emergency arising on the site and their effects. In order to comply with this requirement the licensee issues an Emergency Plan.
3. ONR has previously approved the Oldbury Emergency Plan using primary powers under LC 11(3) (Ref. 2). To comply with LC 11(3) the licensee needs to obtain ONR's Approval for alteration or amendment to the approved arrangements.
4. Oldbury ceased power generation in 2012 and the de-fuelling of the reactors was completed in 2016, thereby removing most of the nuclear hazard from site. MxL is now in the process of decommissioning the site.
5. REPPiR places duties on MxL that include having an operator's emergency plan and off-site emergency plan. In 2016, MxL submitted to ONR a combined Report of Assessment (RoA) and Hazard Identification and Risk Evaluation (HIRE) (Ref.3) in accordance with REPPiR.
6. The RoA/HIRE submission considered that there had been a substantial reduction in both hazard and risk of a radiation emergency at site due to the defuelled status of the reactors. MxL concluded that it was not reasonably foreseeable that any fault at Oldbury could lead to a radiation emergency. It therefore considered that the current emergency planning zone, based upon a 1 km radius, is sufficient, but arguably excessive. ONR's assessment of the RoA and HIRE submissions for Oldbury concluded that it was content with MxL's judgment (Ref. 4).
7. In December 2017, ONR wrote to the Oldbury Site Director (Ref.5) in respect of the REPPiR off-site emergency planning and prior information area. The letter included notification that the REPPiR off-site emergency planning area was no longer required. Also, MxL was no longer required under the regulations to specify an area where it must provide prior information to the public.
8. To reflect the reduced radiation hazard at Oldbury site, in 2018 MxL requested, and obtained, ONR Approval (Ref. 2) to alter or amend its approved emergency arrangements. It replaced the site Emergency Plan with the Oldbury Approved Accident and Emergency Arrangements. The new plan was supported by a revised site emergency handbook.
9. In February 2019 MxL wrote to ONR (Ref.1) requesting Approval under LC 11(3) for the alteration or amendment to the site emergency plan (Oldbury Approved Accident and Emergency Arrangements). MxL considers that the Oldbury decommissioning programme is not a 24/7 operation and the site has a low hazard profile. It is proposing, therefore, to introduce what it considers to be more proportionate manning arrangements during silent hours (when limited work is being undertaken on site), known as operational shift transition (OST).
10. MxL are proposing to cease shift operations at Oldbury, which will entail completely withdrawing shift operations personnel and contractors during silent hours. Emergency response during silent hours will be provided by the continuous, on-site security guard presence. MxL has also undertaken modification work to support the

proposal, including updating and modifying site alarm systems and enhancements to the site security system. The proposal has followed MxL's due process, which included oversight from its Internal Regulator and consideration by the Nuclear Safety Committee (Ref. 6 & Ref. 7).

11. MxL has undertaken a programme of desktop and small scale exercises to test and prove its new arrangements. This culminated in March 2019 with a practical demonstration of the new arrangements that was witnessed by ONR's Nominated Site Inspector, who judged that the exercise had adequately demonstrated its proposed arrangements (Ref. 8).
12. Following the demonstration exercise, a MxL executive-led readiness review was conducted on 18 March 2018 (Ref. 9) led by MxL's Shift Transition Programme Manager. This review concluded that the OST project can proceed to implementation subject to the completion of relevant pre-transition actions detailed with the Quality Plan (Ref. 10).

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

13. ONR has considered MxL's request for Approval and has followed ONR procedures for delivering a permissioning project, as detailed in HOW2 (Ref. 11).
14. OST has been implemented adequately at a number of other MxL sites; this is not a new or novel activity and MxL has drawn upon this operating experience throughout its planning and implementation phases.
15. MxL has assigned a categorisation of 'three', low radiological consequences, to the modification proposal which documents this change. ONR does not require MxL to notify it, through LC compliance arrangements, of such low category modifications, however the proposal requires alteration or amendment to approved emergency arrangements which necessitates issuing of a primary power Licence Instrument. ONR examined part 4 of this category 3 modification – the nuclear safety assessment (Ref. 12) – whilst on-site in January 2019 and noted in its Contact Record (Ref. 13) that the assessment has considered the implementation of OST on each of the faults listed in the site's Live Safety Case Summary (OLD-EPREP-1286), and has concluded that the change has no impact upon nuclear safety. ONR examined the nuclear safety assessment and considers it to be a systematic examination of the impact of the change on the ten faults identified in the Reference Safety Case (2 x DB1 and 8 x Low Consequence). Given the site has now removed the IONSIV cartridges from the Ponds and they are now secured in MOSAIK, the 2 x DB1 faults can no longer be realised. There are presently (based on current operations) no reasonably foreseeable sequences which could give rise to a DB1, DB2 or Low Consequence fault.
16. MxL has also undertaken an assessment of the organisational change (Ref. 14) in accordance with its arrangements made under Licence Condition 36. ONR examined this assessment and found that it broadly meets the advice as set out in ONR's Technical Assessment Guides. We also examined the MxL executive readiness review (Ref. 9) which concluded that OST can proceed to implementation.

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

17. There are no unresolved issues remaining from ONR's assessment and inspection work.

### **5 CONCLUSIONS**



18. In ONR's opinion the licensee's proposed alteration or amendment of the Oldbury emergency arrangements is adequate to satisfy the requirements of LC11. In reaching this opinion we have taken into account of the following:
- ONR's interventions with the licensee on the proposed new arrangements, and an adequate demonstration of the new arrangements.
  - ONR's satisfaction with the licensee's submissions such that the REPPiR off-site emergency area for the purposes of public protection no longer applies;
  - The proposal has followed the licensee's due process and is supported by its Nuclear Safety Committee;
  - A positive outcome from a MxL executive-led readiness review;
  - Confirmation that the change has no impact upon nuclear safety; and
  - The decision is consistent with those made at similar defueled Magnox sites.

## **6 RECOMMENDATIONS**

19. It is recommended that a person with delegated authority within ONR:
- Accepts the regulatory judgements in this report that justify issuing Licence Instrument 558, an Approval;
  - Approves this report for publication after redaction as appropriate;
  - Signs Licence Instrument 558 giving effect to ONR's Approval of the proposed amendments to the Oldbury Emergency Plan under LC 11(3).

## 7 REFERENCES

1. Request for alteration or amendment to the Oldbury approved accident and emergency arrangements OBA 51057R (2019/44501)
2. Licence Instrument 556, Approval (2019/77646)
3. Oldbury RoA / HIRE submission (2016/160225)
4. Determination of the Requirement for a Local Authority Off-site Emergency Planning Area and Operator's Prior Information Area in Relation to the Magnox Ltd. Oldbury Site in Accordance with Regulations 9(1) and 16(1) of the Radiation (Emergency Preparedness and Public Information) Regulations (REPPIR) 2001 (2017/0392813)
5. Oldbury off-site emergency planning and prior information area (2017/439499)
6. NSC Supporting Papers OLD-ACCIMER-001 Issue 2 dated September 2018 & NP/SC 5377 Revision1, 'Proposed changes to the Oldbury Site Accident and Emergency Arrangements for Monitoring and Surveillance in Silent Hours' (2019/44501)
7. NSC Minutes (2019/44501)
8. ONR Intervention Record (LC11): ONR-SDFW-IR-18-214 Revision 0 – Oldbury – Level 1 Demonstration of Emergency Plan (2019/77224)
9. Magnox Executive Readiness Review Statement: Oldbury Shift Transition 25<sup>th</sup> March 2019 (2019/79989)
10. DPAF Quality Plan – DPAF No. 12037 – OLD-QP-1212 Issue No. 1 (2019/0087457)
11. ONR HOW2 Guide - Purpose and Scope of Permissioning - NS-PER-GD-014 Rev. 6
12. Category 3 Modification – Part 4 Nuclear Safety Assessment (2019/0032705)
13. ONR Contact Record: ONR-SDFW-CR-18-928 Revision 0 - Operations Shift Transition (2019/33189)
14. Baseline Organisational Change Management Form S-276/04/2018 (2019/0087450)