



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

Project Assessment Report ONR-SDFW-PAR-17-015
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EXECUTIVE SUMMARY

Trawsfynydd Emergency Arrangements

This report presents the findings of the Office for Nuclear Regulation's (ONR) consideration of Magnox Limited's request for an Approval to amend or alter the Approved Trawsfynydd Emergency Plan.

Permission Requested

Magnox Limited, the licensee for Trawsfynydd power station, has written to ONR requesting an Approval under Licence Condition (LC) 11 (3), 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 accident and emergency arrangements.

ONR has previously approved the Trawsfynydd 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.

Trawsfynydd site ceased power generation in 1991 and was declared to be fuel free in 1995, thereby removing most of the nuclear hazard from the site. Magnox Limited is now in the process of decommissioning the site. In April 2017 it requested and obtained ONR Approval to alteration or amendment of the site's off-site emergency arrangements to reflect the reduced nuclear hazard.

Magnox Limited is now requesting ONR Approval to implement Operational Shift Transition at Trawsfynydd. It is proposing to cease shift operations on site, which involves the complete withdrawal of shift personnel during silent hours (no operations on site). Continuous on-site safety and security will be provided by an enhanced Security Guard presence during silent hours. Overall, Magnox Limited 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 ONR 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.

Matters arising from ONR's work

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

Conclusions

In my opinion the licensee's proposed alteration or amendment of the Trawsfynydd emergency arrangements is adequate to satisfy the requirements of Licence Condition 11. In formulating my opinion I have taken into account of the following:

- ONR's interventions with the licensee on the proposed new arrangements, which culminated in it supporting implementation.
- ONR's satisfaction with the licensee's submissions such that the REPPIR off-site emergency area for the purposes of public protection no longer applied.
- The proposal has followed the licensee's due process and is supported by its Nuclear Safety Committee.

Recommendations

I recommend that:

- The Superintending Inspector for the Decommissioning, Fuel and Waste (DFW) sub-division accepts the regulatory judgements in this report that justify issuing Licence Instrument 533, an Approval.
- The Superintending Inspector for the DFW sub-division approves this report for publication after redaction as appropriate.
- The Superintending Inspector for the DFW sub-division signs Licence Instrument 533 giving effect to ONR's Approval of the proposed amendments to the Trawsfynydd emergency plan under LC 11(3).

LIST OF ABBREVIATIONS

DFW	Decommissioning Fuel and Waste
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. Magnox Limited (MxL), the licensee for Trawsfynydd power station, has written to ONR requesting Approval under Licence Condition 11 (3) (Ref. 1), emergency arrangements, of alteration or amendment to the site's Approved Emergency Plan. This report presents the findings of the Office for Nuclear Regulation's (ONR) consideration of MxL's request.

2 BACKGROUND

2. Licence Condition (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 Trawsfynydd 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. Trawsfynydd site ceased power generation in 1991 and was declared to be fuel free in 1995, thereby removing most of the nuclear hazard from site. MxL are now in the process of decommissioning the site.
5. The Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPiR) places duties on MxL that include having an operator's emergency plan and off-site emergency plan. In 2013, MxL submitted to ONR a combined Report of Assessment (RoA) and Hazard Identification and Risk Evaluation (HIRE) in accordance with REPPiR (Ref.3).
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 with all spent fuel removed from site. MxL concluded that it was not reasonably foreseeable that any fault at Trawsfynydd could lead to a radiation emergency. It therefore considered that the current emergency planning zone, based upon a 1.3Km radius, is sufficient, but arguably excessive. ONR's assessment of the RoA and HIRE submissions for Trawsfynydd concluded that it was content with MxL's judgment (Ref. 4 and 5).
7. In March 2015, ONR wrote to the Trawsfynydd Site Director (Ref.6) 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 Trawsfynydd site, in 2016 MxL requested, and obtained, ONR Approval (Ref. 7) to alter or amend its Approved emergency arrangements. It replaced the site Emergency Plan with the Trawsfynydd Accident and Emergency Arrangements. The new plan was supported by a revised site emergency handbook.
9. In June 2017 MxL wrote to ONR requesting Approval under LC 11(3) for the alteration or amendment to the site emergency plan (Trawsfynydd Accident and Emergency Arrangements). MxL considers that the Trawsfynydd 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 no work is being undertaken on site). Trawsfynydd is one of the lead and learn sites for this proposal, which is known as the Operations Shift Transition (OST) project.

10. MxL are proposing to cease shift operations on Trawsfynydd, 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 modify where necessary the site fire alarm system replacing the active drains with mobile bowzers, and enhancements to the site security system. The proposal has followed MxL's due process, which included oversight from its internal regulator consideration by the Nuclear Safety Committee (Ref. 1).
11. Site has undertaken a programme of desktop and small scale exercises to test and proves its new arrangements. This culminated in August 2017 with a practical demonstration of the new arrangements that was witnessed by key MxL personnel, including internal regulators, MxL emergency planning lead, MxL head of security and the Chief Nuclear Officer. Overall, MxL judged that the exercise had adequately demonstrated its proposed arrangements (Ref. 8).
12. On completion of the OST work, the Trawsfynydd site closure director took the decision that the site was ready to implement the proposal. The level of oversight was in addition to the site's LC 11 arrangements.

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

13. I have considered MxL request for Approval as part of my role as the ONR nominated site safety inspector for Trawsfynydd site. I have followed ONR procedures for delivering a permissioning project, as detailed in HOW2 (Ref. 9). To support my work I have utilised the services of ONR specialist assessors in fire safety, security and, human and organisational capability, who I consider cover the disciplines necessary to make an informed, proportionate judgement.
14. MxL has assigned a categorisation of three, low radiological consequences, to the proposal. 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 (LI).
15. ONR has undertaken a number of nuclear safety, fire and security-related engagements with MxL on its proposed alteration or amendment of the Trawsfynydd emergency arrangements (Ref.10-13). During these engagements MxL confirmed that it was enhancing supervision by increasing by one person the number of guard staff on each shift. ONR considered that MxL's action was reasonable.
16. Overall, ONR's engagements did not identify any shortfalls that would prevent it approving MxL's OST proposal.
17. MxL provided ONR with documentation (Ref.14, 15) to support its proposal. This included the justification of the proposed modification, supporting quality plan, safety case review report, environmental risk assessment and management of change report. I sampled the documentation and sought further clarification and confirmation from MxL on points relating to closure of actions and recommendations (Ref. 16). I am content with the responses MxL provided.
18. I sampled MxL's internal regulator's contingency exercise close-out report (Ref. 8). The internal regulator concluded that the exercise enabled site to provide an adequate demonstration of the proposed accident and emergency arrangements. The internal regulator provided six proposals in the report's recommendations section to strengthen the arrangements and improve the site's responses to significant events and site incidents. MxL has confirmed (Ref. 8 and 16) that the proposals will be addressed as

part of its due process. I am content with MxL's internal regulator's oversight of OST and MxL's responses to the proposals.

4 MATTERS ARISING FROM ONR'S WORK

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

5 CONCLUSIONS

20. In my opinion the licensee's proposed alteration or amendment of the Trawsfynydd emergency arrangements is adequate to satisfy the requirements of Licence Condition 11. In reaching my opinion I have taken into account of the following:

- The proposal is supported by the licensee's internal regulator.
- ONR's interventions with site staff on the proposed new arrangements, which culminated in it supporting implementation.
- ONR's satisfaction with the licensee's submissions such that the REPPIR off-site emergency area for the purposes of public protection no longer apply.
- The proposal has followed the licensee's due process and is supported by its Nuclear Safety Committee.

6 RECOMMENDATIONS

21. I recommend that
- The Superintending Inspector for the DFW Sites sub-division accepts the regulatory judgements in this report that justify issuing Licence Instrument 533, Approval.
 - The Superintending Inspector for the DFW Sites sub-division approves this report for publication after redaction as appropriate.
 - The Superintending Inspector for the DFW sub-division signs Licence Instrument 533 giving effect to ONR's Approval of the alteration or amendment to the Trawsfynydd emergency plan under LC 11(3).

7 REFERENCES

1. Request letter TRW50863R TRIM Ref.2017/237008.
2. Licence Instrument 532, Approval. TRIM Ref. 2017/332777
3. Trawsfynydd RoA / HIRE submission. TRIM Ref.2013/297790
4. ONR-DFW-AR-14-010. Fault studies assessment of TRW REPPIR submission. TRIM Ref. 2014/355445.
5. ONR-COP-PAR-14-004. Determination of the requirement for off-site emergency planning and public information areas for Trawsfynydd. TRIM Ref. 2015/51785.
6. ONR-EPR-15-48. ONR letter to Trawsfynydd on REPPIR. TRIM Ref. 2015/97507.
7. Extant LC 11(3) Approval LI 532. TRIM Ref. 2017/332777.
8. Trawsfynydd OST contingency arrangement demonstration. TRIM Ref. 2017/343148.
9. ONR HOW2 Guide - Purpose and Scope of Permissioning - NS-PER-GD-014 Revision 4. <http://www.onr.org.uk/operational/assessment/index.htm>
10. ONR-SDFW-IR-16-152, Planned inspection. TRIM Ref. 2016/501401.
11. ONR-COP-IR-16-073, Fire safety audit. TRIM Ref. 2017/88813.
12. ONR-SDFW-IR-17-011. Planned inspection. TRIM Ref. 2017/175265.
13. ONR-SDFW-IR-17-054. Planned inspection. TRIM Ref. 2017/269093.
14. OST supporting documents. TRIM Ref. 2017/321304.
15. OST supporting document. TRIM Ref. 2017/322758.
16. OST additional clarification and confirmation. TRIM Ref. 2017/349275.