



Sizewell A Site Emergency Arrangements

**Request for Approval under Licence Condition 11 (3) of the Amendment to the
Sizewell A Site Emergency Arrangements**

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EXECUTIVE SUMMARY

This report presents the findings of the Office for Nuclear Regulation's (ONR) consideration of Magnox Limited's (ML) request for an Approval to amend or alter the approved Sizewell A Site accident and emergency arrangements.

Permission Requested

ML, the licensee for Sizewell A site, has written to ONR requesting an Approval under Licence Condition (LC) 11, emergency arrangements, for amendment to the site's accident and emergency arrangements.

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. To comply with this requirement the licensee issues accident and emergency arrangements.

ONR previously approved the Sizewell A site accident and emergency arrangements using primary powers under LC 11(3). To comply with LC 11(3) the licensee needs to obtain ONR Approval for further amendment to those previously Approved accident and emergency arrangements.

Sizewell A site ceased power generation in 2006 and the de-fuelling of the reactors was completed in 2014, thereby removing most of the nuclear hazard from the site. The site is now in the decommissioning stage of its lifecycle.

ML is requesting ONR's Approval to implement operational shift transition at Sizewell A site. It is proposing to cease shift operations on site, which involves the complete withdrawal of shift operational personnel during silent hours. Continuous on-site safety and security will be provided by an enhanced security guard presence during silent hours. Overall, ML 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 accident and emergency 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

I am satisfied that the licensee's proposed amendment of the Sizewell A accident and emergency arrangements is adequate and satisfies the requirements of licence condition 11.

Recommendations

I recommend that in accordance with LC 11(3), ONR approves the proposed amendment to Sizewell A's accident and emergency arrangements.

LIST OF ABBREVIATIONS

ACOP	Approved Code of Practice
LC	Licence Condition
ML	Magnox Limited
ONR	Office for Nuclear Regulation
OST	Operational Shift Transition
REPPIR	Radiation (Emergency Preparedness and Public Information) Regulations
SZA	Sizewell A

TABLE OF CONTENTS

1	PERMISSION REQUESTED	6
2	BACKGROUND	6
3	ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST	7
4	MATTERS ARISING FROM ONR'S WORK.....	7
5	CONCLUSIONS	7
6	RECOMMENDATIONS.....	8
7	REFERENCES	9

1 PERMISSION REQUESTED

1. Magnox Limited (ML), the licensee for Sizewell A site, has written to ONR requesting Approval under LC 11 (3) (Ref. 1), emergency arrangements, of amendment to the site's approved accident and emergency arrangements. This report presents the findings of ONR's consideration of ML'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 its accident and emergency arrangements.
3. ONR has previously approved the Sizewell A site accident and emergency arrangements using primary powers under LC 11(3) (Ref. 2). LC 11(3) requires that once approved by ONR the licensee shall ensure that no alteration or amendment is made to the approved arrangements unless ONR has approved such alteration or amendment.
4. Sizewell A site ceased power generation in 2006 and the de-fuelling of the reactors was completed in 2015, thereby removing most of the nuclear hazard from site. ML is now in the process of decommissioning the site.
5. Under REPIR 2019 there has been a shift in responsibility for determining a licenced nuclear site's off-site emergency planning zone to the local authority who will take into account in their decision Sizewell A's hazard evaluation and consequence assessment. ML has carried out the required assessment (Ref. 3) and determined that the quantity of radioactive substances on the site, in a radiation emergency situation, is not likely to exceed an annual effective dose to persons off site greater than 1 mSv (the threshold for a radiation emergency). Consequently, in accordance with REPIR 2019 Regulation 3(2), ML has concluded that REPIR 2019 does not apply to the work undertaken at Sizewell A.
6. To reflect the reduced nuclear hazard at Sizewell A site, in 2016 ML requested, and obtained, ONR Approval (Ref. 2) to amend its ONR approved emergency plan. Sizewell A replaced its site Emergency Plan with the Sizewell A Accident and Emergency Arrangements. These new accident and emergency arrangements were supported by a revised site emergency handbook.
7. In April 2019 ML wrote to ONR (Ref.1) requesting Approval under LC 11(3) for an amendment to its accident and emergency arrangements. ML considers that the Sizewell A 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, known as operational shift transition (OST).
8. ML is proposing to cease shift operations at Sizewell A site, 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. ML has also undertaken modification work to support the proposal, including updating and modifying site alarm systems and enhancements to the site security system. I am satisfied this proposal has followed ML's due process, which included oversight from its Internal Regulator and consideration by the Nuclear Safety Committee (Ref. 4 & Ref. 5).
9. ML has undertaken a programme of desktop and small scale exercises to test and prove its new accident and emergency arrangements. This culminated in

November 2019 with a practical demonstration of the new accident and emergency arrangements that was witnessed by ONR's Nominated site Inspector who judged that the exercise had adequately demonstrated its proposed arrangements (Ref. 6).

10. Following the demonstration exercise a ML executive-led readiness review has been conducted (Ref 10). This review concluded that adequate progress is being made by the site to transition to the amended accident and emergency arrangements by the planned date.

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

11. I have considered ML's request for Approval in my role as the ONR Nominated Site Inspector for Sizewell A site. I have followed ONR procedures for delivering a permissioning project, as detailed in HOW2 (Ref. 8).
12. I am satisfied that OST has been implemented adequately at a number of other ML sites; this is not a new or novel activity and ML has drawn upon this operating experience throughout its planning and implementation phases.
13. Licence condition 11(3) requires ONR to make a decision on the implementation of Sizewell A's proposal to amend its accident and emergency arrangements even though ML has assessed the change to have a low radiological consequence. I have completed a proportionate examination of part 4 of this category 3 modification – the nuclear safety assessment and the supporting document titled "Operations Shift Transition - Safety Case Review TR/SC/064 Issue 1 (Ref. 7) – and noted that the assessment has considered the implementation of OST on each of the faults listed in the site's Reference Safety Case Summary and has concluded that the change has no impact upon nuclear safety. I targeted the nuclear safety assessment and I consider it to be a systematic examination of the impact of the change on the faults identified in the Reference Safety Case and note that there are presently (based on current operations) no reasonably foreseeable sequences which could give rise to a DB1, DB2 or DB3 fault.
14. I witnessed a demonstration of the proposed arrangements during an out-of-hours Level 1 emergency exercise on 6 November. My findings are recorded in ONR-SDFW-IR-19-132 (Ref 6). There were some learning points for the licensee, however in my opinion this was an adequate demonstration of the arrangements.
15. ML has prepared a Baseline Organisational Change Management Form titled "Cessation of 24/7 Shift Operations at Sizewell" as required by its LC36 arrangements (Ref 9). This has been categorised as a Category C change, which has been confirmed by a representative from ML's Internal Oversight organisation.

4 MATTERS ARISING FROM ONR'S WORK

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

5 CONCLUSIONS

16. In my opinion the licensee's proposed alteration or amendment of the Sizewell A site accident and emergency arrangements is adequate to satisfy the requirements of LC11. In reaching my opinion I have taken into account the following:
 - ONR's interventions with the licensee on the proposed new arrangements, and an adequate demonstration of the new arrangements.

- ML's conclusion that REPPIR 2019 does not apply to the work undertaken at Sizewell A.
- The proposal has followed the licensee's due process and is supported by its Nuclear Safety Committee;
- 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

17. I recommend that a person with delegated authority within ONR:

- Accepts the regulatory judgements in this report that justify issuing Licence Instrument 519, an Approval;
- Approves this report for publication after redaction as appropriate;
- Signs Licence Instrument 519 giving effect to ONR's Approval of the proposed amendments to the Sizewell A site accident and emergency arrangements under LC 11(3).

7 REFERENCES

1. Request for Approval Under Licence Condition 11(3) of the Amendments to the SZA Emergency Arrangements SZA 52088R (2019/103754)
2. Licence Instrument 516, Approval (2016/219032)
3. Sizewell A REPPIR 2019 Assessment (2019/329772)
4. NSC Supporting Papers SZA ACC EMER Issue 3 dated February 2019 & NP/SC 5384, 'Proposed changes to the Sizewell A Site Accident and Emergency Arrangements for Monitoring and Surveillance in Silent Hours' (2019/103754)
5. NSC Minutes (2019/111392)
6. ONR Intervention Record (LC11): ONR-SDFW-IR-19-132 Revision 0 – Sizewell A – Level 1 Demonstration of Emergency Plan (2019/336235)
7. DPAF No. 19/021 – Sizewell A site, Operations Shift Transition and OST Safety Case Review (2019/331744)
8. ONR HOW2 Guide - Purpose and Scope of Permissioning Proposal Approval NS-PER-GD-014 Rev. 6 (2019/448079)
9. Baseline Organisational Change Management Form S-276/20/2019 (2019/329758)
10. Sizewell Executive OST Readiness Review (2019/341113)