



**Site : Sizewell A
PAR Number: 14-019
Date: February 2015
LC(s): LC11(3)
Licence Instrument: 511
Title: Approval of issue 12 of the site emergency plan**

Sizewell A Transition

Approval of Site Emergency Plan Issue 12

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EXECUTIVE SUMMARY

Title

Approval of site emergency plan issue 12

Permission Requested

Magnox Limited, the licensee, has submitted a written request to the Office for Nuclear Regulation (ONR) for approval of amendments to the site emergency plan for Sizewell A, in accordance with arrangements made under Licence Condition (LC) 11(3).

Background

The existing version of the emergency plan was written prior to the completion of defueling at Sizewell A. Defuelling is now complete, and a comprehensive survey has verified that the process has been effective and all the fuel elements have been completely removed from the site.

With defuelling complete, the potential for a serious accident or emergency with radiological consequences is greatly reduced. The requirements placed on the site's emergency response capability can be correspondingly reduced. The proposed, amended emergency plan sets out the licensee's arrangements for emergency response for the defuelled site.

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

I have assessed the licensee's proposed emergency plan and underpinning justification; held meetings with the licensee; and have witnessed a successful demonstration of the proposed emergency arrangements as recorded in intervention report ONR-DFW-IR-14-129 .

Matters arising from ONR's work

There are no matters arising from my assessment and inspection activities.

Conclusions

The proposal has undergone review within the licensee's organisation and has been subject to ONR assessment and verification through inspection. I am satisfied that there is no technical or regulatory reason that prevents approval of the amended site emergency plan.

Recommendation

I recommend that ONR approves under LC 11(3) the revised emergency plan for Sizewell A by issuing licence instrument 511 for that site.

LIST OF ABBREVIATIONS

| | |
|--------|--|
| ACP | Access Control Point |
| CESC | Central Emergency Support Centre |
| HIRE | Hazard Identification and Risk Evaluation |
| HOW2 | (Office for Nuclear Regulation) Business Management System |
| HSE | The Health and Safety Executive |
| LC | Licence Condition |
| NSC | Nuclear Safety Committee |
| ONR | Office for Nuclear Regulation |
| REPPIR | Radiation (Emergency Preparedness and Public Information) Regulations 2001 |

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Tables

Table 1 – Emergency Scheme Staffing

1 PERMISSION REQUESTED

1. Magnox Limited, the licensee, has submitted [1] a written request for approval of amendments to the site emergency plan for Sizewell A, in accordance with arrangements made under LC 11(3). The proposed amended arrangements are specified in issue 12 of the licensee's emergency plan [1]; the current version of the plan is at issue 9 [2].
2. Between issues 9 and 12, the licensee has submitted two issues of the plan that were subsequently amended and re-submitted prior to ONR approval, and which were therefore never implemented by the licensee:
 - Issue 10 of the plan [3] presented the original proposal for the post-defuelling emergency plan. This was endorsed by the licensee's nuclear safety committee (NSC) [3], and was submitted to ONR on 29 January 2014 for information [3]. The licensee proposed to write to ONR requesting approval of that version of the plan following a successful demonstration of the arrangements, which was held on 20 August 2014.
 - Subsequently, ONR issued its revised determination of the off-site emergency planning area under the Radiation Emergency Preparedness and Information Regulations (REPIR) 2001, which resulted in a significant reduction in the predicted off-site consequences following the worst-case credible accident at Sizewell A, and in the emergency planning area being based on the reference accident from Sizewell B (rather than Sizewell A, as had historically been the case). Issue 11 of the plan [4] was produced to incorporate this revised area and associated changes. This issue of the plan was also endorsed by the NSC [4], and was submitted to ONR for approval [4].
 - Following comments made by Suffolk County Council on issue 11 of the emergency plan, the licensee made a small number of minor changes to produce issue 12 of the plan [1]. The changes were: the removal of all reference to the Home Office publication 'Dealing with Disaster', which is no longer valid; the updating of the description of the media briefing centre to reflect the fact that it is managed jointly by the police and Suffolk County Council (and not by the police alone, as had previously been stated); and the deletion of NHS Direct from the notification chain, as the NHS have changed the arrangements for non-emergency situations and this is no longer an appropriate notification. Because of the minor nature of the changes (and because the NSC had already seen the previous two issues of the plan, which were substantially the same), the NSC chairman agreed that this issue of the plan would be reported retrospectively to the NSC, rather than being formally endorsed.

2 BACKGROUND

3. The existing version of the emergency plan was written prior to the completion of defueling at Sizewell A. Defuelling is now complete, and a comprehensive survey has verified that the process has been effective and all the fuel elements have been completely removed from the site. ONR has inspected the defuelling and verification evidence and has concluded that it is very unlikely that any fuel or significant fuel fragments remains on the site [5].
4. With defuelling complete, the potential for an accident or emergency with significant radiological consequences is greatly reduced. The requirements placed on the site's emergency response capability can therefore be correspondingly reduced. The proposed, amended emergency plan sets out the licensee's arrangements for emergency response for the defuelled site.

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

5. The main change in the emergency arrangements proposed in issue 9 of the plan and those proposed in issue 12 is in the staffing of the emergency scheme organisation. The licensee has produced a justification for the proposed changes [6]; Table 1 summarises the changes and my comments on the detail. Many of the changes represent changes in nomenclature rather than significant changes in role; some are the removal of roles related to reactor operation, which are clearly no longer required on a defueled site. I consider there to be two changes which warrant further discussion:
- The licensee argues that, with the site fuel free, a fuel fire is no longer a possibility and so there is no longer a need to retain an on-site fire and rescue team with breathing apparatus capability (suitable local arrangements and equipment will be maintained for hot work or other high fire-risk project work); the site can instead rely on Suffolk Fire and Rescue. Other functions of the response team (such as rescue from height, or confined space rescue) will be performed by project teams; project work will not be permissioned unless adequate rescue response is available. The site's response team can therefore be replaced by a smaller initial response team, which will assess the incident, set up a forward control point if needed, and liaise with Suffolk Fire and Rescue on their arrival.

Because greater reliance is placed on Suffolk Fire and Rescue, who will deploy straight to the forward control point, there is less urgency in setting up the access control point (ACP), which is used primarily to process potentially contaminated individuals returning from the incident scene. Therefore the access controller role is not needed immediately and can be filled by either an on-call assistant or the initial emergency controller, once he has handed over to the duty emergency controller.
 - The off-site survey vehicles (used by both Sizewell A and Sizewell B) will in future be provided under contract by Sizewell B, if required. A dispatcher will also be provided if the vehicles are required and the central emergency support centre (CESC) in Barnwood is not yet operational; otherwise the CESC will dispatch the vehicles, as under the current arrangements. The expected response time will remain unchanged.
6. I am content with the arguments provided in support of the first bullet point, which mirror the arrangements that have been implemented on other sites without issue. The hazard identification and risk evaluation report for Sizewell A [7] identifies only one fault with the potential for a dose greater than 0.1 mSv; a loss of pond water with the ponds full of fuel. With all fuel removed from site, this fault is no longer credible. The need to act urgently to prevent an off-site release has therefore been removed.
7. Regarding the second bullet point, I do not consider it to be significant as the response capability has not changed. Furthermore, the emergency plan is worded in such a way as to allow for either station to provide the service. I am satisfied that Sizewell A and Sizewell B have developed between them a training and authorisation process that will prevent the transfer of the vehicles until both sites are satisfied, recognising that both sites have duties to ensure the adequacy of the service under their respective site licences [8].
8. I note that the arrangements the licensee proposes in issue 12 of the Sizewell A emergency plan are consistent with those approved by ONR for the other decommissioning sites in the Magnox Limited fleet (most recently at Chapelcross via

LI 529). These arrangements, in general, have led to successful on-site annual emergency demonstration exercises across the fleet.

9. The licensee has also carried out an out-of-hours demonstration of the proposed new arrangements at Sizewell A, which I witnessed. Out-of-hours is when the proposed new arrangements are most challenged, since the emergency scheme organisation is operating at its minimum level, with the majority of responders on call rather than present on the site as would be the case during working hours.
10. The exercise was attended by Suffolk Fire and Rescue, who demonstrated that they were able to interface effectively with the new emergency scheme organisation.
11. I considered the exercise to be a good demonstration of the revised arrangements, which clearly showed that they could be made to work on the site [9].
12. I have inspected the licensee's training and authorisation records and consider that the site is in a position to adopt the arrangements now [8], although I note that they continue to train new emergency responders to improve organisational resilience.
13. I therefore consider that the licensee's arrangements are appropriate for the level of hazard now posed by the site, and that the licensee will be able to implement them effectively.

4 MATTERS ARISING FROM ONR'S WORK

14. There are no matters arising from my assessment.

5 CONCLUSIONS

15. I have satisfied myself, through meetings and correspondence with the licensee, witnessing a demonstration of the proposed arrangements, and assessment of the licensee's submission and underpinning justification, that the licensee has justified the proposed amendments and is in a position to implement the new site emergency plan and underlying detailed arrangements at Sizewell A. I am therefore satisfied that there is no technical or regulatory reason that prevents approval of the amended site emergency plan.

6 RECOMMENDATIONS

16. I recommend that ONR approves under LC 11(3) the revised emergency plan for Sizewell A by issuing licence instrument 511 for that site.

7 REFERENCES

1. SZA/52005R REQUEST FOR APPROVAL OF SITE EMERGENCY PLAN ISSUE 12. 13 January 2015 (TRIM ref. 2015/18207). Includes as attachment:
 - SIZEWELL A EMERGENCY PLAN ISSUE 12 Magnox Ltd SIZEWELL 'A' SITE EMERGENCY PLAN, 12/1/15.
2. SZA 51867R REQUEST FOR APPROVAL OF SITE EMERGENCY PLAN ISSUE 9. 9 February 2011 (TRIM ref. 2011/89865). Includes as attachment:
 - SIZA EM HBK SEC 1 ISSUE 9 Magnox Ltd SIZEWELL 'A' SITE EMERGENCY PLAN HANDBOOK SECTION 1: SIZEWELL 'A' SITE EMERGENCY PLAN, 31/01/11.
3. SZA/51971N SIZEWELL A TRANSITION: PROPOSED CHANGES TO THE SIZEWELL A SITE EMERGENCY ARRANGEMENTS POST DEFUELLING, 29 January 2014 (TRIM ref. 2014/48535). Includes as attachments:
 - Minutes of the Joint Meeting of the Magnox Limited Oldbury, Sizewell A and Wylfa Nuclear Safety Committees held on Tuesday 3 December 2013 at Oldbury Technical Centre, 17/12/13.
 - SIZEWELL A EMERGENCY PLAN ISSUE 10 Magnox Ltd SIZEWELL 'A' SITE EMERGENCY PLAN, 24/09/13.
4. SZA/51998R REQUEST FOR APPROVAL OF SITE EMERGENCY PLAN ISSUE 11, 4 December 2014 (TRIM ref. 2014/448944). Includes as attachments:
 - SIZEWELL A EMERGENCY PLAN ISSUE 11 Magnox Ltd SIZEWELL 'A' SITE EMERGENCY PLAN, 17/09/14.
 - Minutes of the Joint Meeting of the Magnox Limited Oldbury, Sizewell A and Wylfa Nuclear Safety Committees held on Tuesday 30 September 2014 at Oldbury Technical Centre, 13/10/14.
5. ONR-DFW-IR-14-185 Sizewell A fuel free verification inspection and annual review of safety, 17 December 2014 (TRIM ref. 2014/461303).
6. TR/SE/542 Issue 1 JUSTIFICATION OF THE PROPOSED EMERGENCY PLAN FOR SIZEWELL 'A' AS A DECOMMISSIONING SITE, December 2014 (TRIM ref. 2014/467111).
7. TR/SE/221 Issue 2 Sizewell 'A': REPPIR Regulation 6(4) Hazard Identification and Risk Evaluation Report of Assessment, September 2011 (TRIM ref. 2011/542637).
8. ONR-DFW-IR-14-201 Sizewell A planned system inspection, February 2014 (TRIM ref. 2015/30507).
9. ONR-DFW-IR-14-129 Sizewell A LC 11 and 23 compliance inspection and fuel free verification inspection, 1 September 2014 (TRIM ref. 2014/321585).

**Table 1
Emergency Scheme Staffing**

| Issue 9 organisation | Issue 12 organisation | ONR comment |
|--|---|---|
| Staff available on site at all times | | |
| Initial emergency controller | Initial emergency controller | No change |
| Main control room supervisor | Role no longer required | With all fuel off site, I agree that the main control room supervisor role (the purpose of which was control and supervision of the fuel route) is no longer required |
| Initial external communications officer | Role can be filled by the initial emergency controller | |
| Access controller | Filled by assistant access controller or initial emergency controller (on handover) | See section 3, paragraphs 5 and 6 |
| Assistant access controller | Now a standby role, see below | See section 3, paragraphs 5 and 6 |
| Breathing apparatus control officer Response team leader Response team member x 3 | Initial response team x 2 | See section 3, paragraphs 5 and 6 |
| Emergency services liaison | Emergency services liaison | No change |
| Staff contracted to be able to reach site within one hour of notification of an incident | | |
| Emergency controller | Emergency controller | No change |
| Emergency health physicist | Emergency health physicist | No change |
| Emergency technical advisor (emergency control centre) | Emergency technical advisor | No change |
| Emergency technical advisor (access control point) | Role no longer required | A specific technical advisor for the ACP was required for generation faults; I do not consider that any of the decommissioning faults require a specific advisor in the ACP |
| Emergency admin officer | Emergency admin officer | No change |
| Off-site survey vehicle driver x 2 Dispatcher | Off-site survey vehicle drivers x 2 | See section 3 |
| - | Assistant access controller | See section 3 |
| Contingency team leader Contingency team x 3 | Access control point response team x 4 | No significant change |
| Health physics monitor/undresser | Undresser | No significant change |
| - | Occupational first aider | |
| - | First aider | |