



Emergency Arrangements

Approval of the amended Site Emergency Plan - Issue 2, Rev 3

Project Assessment Report ONR-DEF-PAR-14-30
Revision 0
February 2015

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Published 05/15

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EXECUTIVE SUMMARY

Title

Approval of the amended Site Emergency Plan - Issue 2, Rev 3

Permission Requested

BAE Systems Marine Ltd, the licensee, has submitted a written request to the Office for Nuclear Regulation (ONR) for approval of amendments to the site emergency plan for the Devonshire Dock Complex, in accordance with arrangements made under Licence Condition 11(3).

Background

Licence Condition 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 BAE Systems Marine Ltd produced an Emergency Plan, which was last approved by the ONR in August 2011.

BAE Systems Marine Ltd is now proposing amendments to its approved Emergency Plan to enable all non-essential personnel to be evacuated from the site, as a precautionary measure, well in advance of any potential declaration of a nuclear emergency. BAE Systems Marine Ltd is now seeking ONR approval for these amendments.

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

I have assessed the licensee's proposed emergency plan; held meetings with the licensee and have witnessed a demonstration of the proposed emergency arrangements.

I have consulted with the Defence Nuclear Safety Regulator who has provided assurance over the timescales associated with the submarine reference accident and the timescales to facilitate the successful delivery of the proposed emergency plan and indicated it has no objection to ONR approving the amendments to the proposed emergency plan.

Matters arising from ONR's work

There are no matters arising from my assessment.

Conclusions

The amended Nuclear Emergency Plan submitted by BAE Systems Marine Ltd has been subject to the company due process including endorsement by the Nuclear Safety Committee. The arrangements have also been assessed by ONR and DNSR (Defence Nuclear Safety Regulator) and considered adequate to satisfy the requirements of LC 11.

Recommendation

I recommend that ONR should approve under LC 11(3) the amended emergency plan for the Devonshire Dock Complex by issuing licence instrument No. 514.

LIST OF ABBREVIATIONS

BAESM	BAE Systems Marine Ltd
DNSR	Defence Nuclear Safety Regulator
HIRE	Hazard Identification and Risk Evaluation
HSE	The Health and Safety Executive
LC	Licence Condition
MOD	Ministry of Defence
NSC	Nuclear Safety Committee
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report
PRT	Power Range Testing
RSA	Reactor Safety Alert

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1 PERMISSION REQUESTED

1. BAE Systems Marine Ltd (the licensee) has written to the Office for Nuclear Regulation (ONR) requesting approval of its amended site Emergency Plan, NSRD/GR04-002 Issue 2 Revision 3 (Ref. 1).

2 BACKGROUND

2. Licence Condition 11, Emergency Arrangements, requires the licensee to make and implement adequate arrangements for dealing with any accident or emergency arising on the licensed site and their effects. In order to comply with this requirement, the licensee produced a Nuclear Site Emergency Plan, which was last approved by the Health and Safety Executive in August 2011 (Ref. 2).
3. The licensee is proposing amendments to its approved Emergency Plan to enable all non-essential personnel to be evacuated from the whole of the BAE Barrow site (site), as a precautionary measure, in advance of any nuclear emergency being declared.
4. The licensee is now seeking ONR approval for these amendments.

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

5. The main proposed amendment to the emergency arrangements is that when a Reactor Safety Alert (RSA) is declared, the licensee will implement measures to instruct all non-essential personnel to return to their normal place of work, collect their belongings and prepare to leave the site. On exit from the site, the electronic personnel accounting system will record exiting persons and accountancy measures are initiated to determine the numbers and names of persons who remain within the site. Personnel who remain on site will either be emergency scheme personnel, ships staff or persons unaccounted for.
6. The fundamental basis of the amendments to the emergency plan is to instruct personnel to exit the site, as a precautionary measure, in advance of any potential declaration of a nuclear emergency.
7. I requested that the licensee provide more evidence to support the claim that sufficient time was available to ensure all non-essential personnel could safely exit the site before any release of activity occurs (Ref. 3).
8. The licensee provided the requested evidence (Ref. 4 and 5).
9. Reference 4 and 5 support the licensee's argument that, for a submarine reference accident, the licensee will have a minimum of 2 hours to ensure all non-essential personnel have exited the site before the onset of core melt and fission product release.
10. Therefore I agree that as a precautionary measure, instructing all non-essential personnel to leave the site following declaration of RSA will increase the time allowable to the licensee to ensure all non-essential personnel have left the site.
11. I sought assurance from the Defence Nuclear Safety Regulator (DNSR) that the arguments presented by the licensee are consistent with naval reactor plant safety assessments and also if DNSR had any concerns over ONR approving the amendments to the proposed emergency plan (Ref 6).
12. DNSR has provided assurance over the timescales associated with the submarine reference accident and the timescales to facilitate the successful execution of the

proposed emergency plan. DNSR also confirmed it had no objection to ONR approving the amendments to the proposed emergency plan (Ref. 7).

13. In support of the amendments to the plan, the licensee conducted a demonstration exercise to test their proposed arrangements on the 17 December 2014. A regulatory team from ONR and DNSR assessed the licensee's performance and judged the exercise to be an adequate demonstration of the licensee's proposed amended emergency plan (Ref 8). The exercise commenced on the afternoon of the 17 December 2014 and following the declaration of RSA approximately 1700 persons within the Devonshire Dock Complex were instructed to return to their normal place of work and await instructions to exit the site. Within approximately 1 hour and 15 minutes of RSA declaration, all but 1 non-essential personnel had exited the site and had been accounted for. The unaccounted person was later discovered within the Barrow town. The timescales necessary for personnel to exit the site and be accounted for demonstrates adequate margin before the onset of the reference accident and potential release of activity.
14. Other changes to the Emergency Plan are consequential revisions correcting function names and I do not consider them to be significant as the emergency response capability and staffing has not changed.
15. A final, dated version of the amended Emergency Plan was received by ONR on the 2 February 2015 (Ref. 9).
16. I consider that the licensee's arrangements are appropriate for the level of hazard posed by the site, and that the licensee will be able to implement them effectively.

4 MATTERS ARISING FROM ONR'S WORK

17. There are no matters arising from my assessment.

5 CONCLUSIONS

18. 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, 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 the Devonshire Dock Complex. There is therefore no technical or regulatory reason that prevents approval of the amended site emergency plan.

6 RECOMMENDATIONS

19. I recommend that ONR should approve under LC 11(3) the revised emergency plan for the Devonshire Dock Complex by issuing licence instrument No. 514.

7 REFERENCES

1. Emailed letter dated 23 January 2015 (TRIM ref. 2015/30098). Includes as attachment:
 - BAE Systems Marine Letter requesting approval of the nuclear site emergency plan, eDMS 1802442, dated 23 January 2015
 - BAE Systems Submarine Nuclear Site Emergency Plan Issue 2 11.07.2011 Rev3, eDMS 1586217
2. BAE Systems Submarine Nuclear Site Emergency Plan Issue 2 11.07.2011 Rev 2 08.08.2011, eDMS 1586217 (TRIM ref. 2011/418646).
3. Email to BAESM dated 29 January 2015 (TRIM Ref. 2015/35918).
4. Letter from BAESM to ONR dated 31 July 2014 (TRIM Ref. 2014/292119). Includes as attachment:
 - BAESM Report 'Proposed Amendments to Accountability and Sheltering Arrangements' eDMS 1792354 dated July 2014.
5. Email from BAESM dated 29 January 2015 (TRIM Ref. 2015/36320). Includes attachment:
 - BAESM Memo re. Review of Site HIRE for LC11 Proposal, eDMS 1792596, dated 31 July 2014.
6. Emails from ONR to DNSR seeking DNSR assurance, dated 29 January 2015 (TRIM Refs. 2015/36488 and 2015/36491).
7. Email from DNSR to ONR providing ONR assurance, dated 16 February 2015 (TRIM Ref. 2015/59713).
8. ONR Intervention Report ONR-DEF-IR-2014-176 dated 15-18 December 2014. (TRIM Ref. 2014/469178)
9. Email from BAESM to ONR dated 2 February 2015 (TRIM 2015/41045). Includes as attachment:
 - BAE Systems Submarine Solutions Nuclear Site Emergency Plan Issue 2 11.07.2011 Rev 3 02.02.2015, eDMS 158621 (TRIM Ref. 2015/41045).