



**Approval of Revisions to the Approved Emergency Arrangements under Licence  
Condition 11(3)**

**Site Licence Condition 11 – Emergency Arrangements  
Request for Approval of Changes to the Nuclear Site Emergency Plan – Topic Manual  
019 (formerly NSRD/GR04-002)**

Project Assessment Report ONR-OFD-PAR-19-003  
Revision 0  
02 July 2019

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Published 10/19

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## EXECUTIVE SUMMARY

### Title

Site Licence Condition 11 – Emergency Arrangements  
Request for Approval of Changes to the Nuclear Site Emergency Plan – Topic Manual 019  
(formerly NSRD/GR04-002)

### Permission Requested

This project assessment report (PAR) is for regulatory approval of amendments to the emergency arrangements of nuclear site licence 42C, Devonshire Dock Complex (DDC). Approval from the Office for Nuclear Regulation (ONR) will be given under licence condition (LC) 11 clause 3 as this is an amendment to the extant, approved arrangements.

### Background

Licence condition 11, emergency arrangements, requires a 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 BAE Systems Marine Limited (the licensee) has produced the document “Nuclear Site Emergency Plan” (NSRD/GR04-002), which was approved by the ONR by issuance of Licence Instrument 516 on 1 February 2017.

ONR relicensed the DDC licensed site on 1 October 2018 to allow construction of two buildings, one on the previous site boundary. The extant emergency arrangements in NSRD/GR04-002 were formally carried forward during relicensing. The emergency plan has subsequently been updated and renamed Topic Manual 019 to reflect the revised nuclear site boundary. The licensee has also included extra content based on relevant good practice (RGP) and made administrative amendments. The licensee is seeking ONR approval for the revised emergency arrangements.

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

I have assessed the impact of the changes to the emergency arrangements. I have confirmed that the revised arrangements relate to relicensing of the site, and any additional amendments reflect relevant good practice (RGP) or are administrative in nature. I have checked that there are no additional changes in site operations that would require a change to the existing supporting emergency arrangements, and that the extant reference accident scenario remains valid.

I have confirmed that the changes have been subject to the licensee’s due process, and have been considered by both the Nuclear Safety Committee and Site Emergency Planning Committee. I have also discussed the changes with the Defence Nuclear Safety Regulator Site Inspector.

### Matters arising from ONR's work

There are no regulatory issues or concerns arising from this assessment. The changes are administrative in nature to reflect the revised nuclear licensed site boundary and RGP. No consequential safety impact has been identified.

### Conclusions

This report presents my assessment findings of the revised emergency arrangements submitted by BAE Systems Marine Limited for approval under LC11 (3). To conclude, I am satisfied that the revised emergency arrangements satisfy the requirements of LC11.

### Recommendation

This project assessment report recommends that approval is given under LC11(3) for the revised Topic Manual 019, Nuclear Site Emergency Plan, Issue 1 08.10.2018 Revision 0 08.10.2018 (Draft B for Approval) and that Licence Instrument 519 be signed by the Deputy Chief Inspector.

## LIST OF ABBREVIATIONS

BNEO	Barrow Nuclear Emergency Orders (BAE Systems Marine Limited)
DCI	Deputy Chief Inspector (ONR)
DDC	Devonshire Dock Complex (BAE Systems Marine Limited)
DNSR	Defence Nuclear Safety Regulator
GPG	Good Practice Guidance (NEAF)
HIRE	Hazard Identification and Risk Evaluation (BAE Systems Marine Limited)
HOW2	Business Management System (ONR)
LC	Licence Condition
LI	Licence Instrument
NEAF	Nuclear Emergency Arrangements Forum
NERO	Nuclear Emergency Response Organisation (BAE Systems Marine Limited)
NSC	Nuclear Safety Committee (BAE Systems Marine Limited)
ONR	Office for Nuclear Regulation
OSNE	Off Site Nuclear Emergency (BAE Systems Marine Limited)
PAR	Project Assessment Report (ONR)
RGP	Relevant Good Practice
RSA	Reactor Safety Alert (BAE Systems Marine Limited)
SAP	Safety Assessment Principle(s) (ONR)
SEPC	Site Emergency Planning Committee (BAE Systems Marine Limited)
SCC	Strategic Co-ordination Centre
TIG	Technical Inspection Guide (ONR)

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## **1 PERMISSION REQUESTED**

1. BAE Systems Marine Limited (the licensee) holds nuclear site licence number 42C for the Devonshire Dock Complex (DDC), Barrow-in-Furness.
2. The licensee has requested the Office for Nuclear Regulation's (ONR's) approval under Licence Condition (LC) 11, Emergency Arrangements, for amendments to its approved emergency arrangements. The licensee submitted updated arrangements to the ONR on 16 April 2019 [1], which are detailed in Topic Manual 019 [2]. Approval by the ONR will be given under LC11 (3) as this is an amendment to existing, approved arrangements.

## **2 BACKGROUND**

3. LC11 requires licensees to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects. The licensee has produced the document titled "Nuclear Site Emergency Plan" NSRD/GR04-002 [3] to comply with this requirement, which was approved previously by the ONR via licence instrument (LI) 516 on 1 February 2017 (CM9 2017/40876) [4].
4. DDC nuclear-licensed site was relicensed on 1 October 2018 with issuance of Licence 42C [5]. This relicensing relates to alteration of the site boundary to allow construction of two additional buildings adjacent to DDC, D58 and D59, one of which was to be constructed on the previous site boundary [6]. These facilities are currently being constructed and will support the future Dreadnought-class submarine programme. The approved emergency arrangements were formally carried forward through relicensing of DDC and therefore remain extant.
5. The licensee has subsequently updated its emergency arrangements in Topic Manual 019 [2] to reflect the amendments to the site boundary in licence number 42C. The Licensee has taken the opportunity to enhance the emergency plan based on relevant good practice (RGP) including extra content suggested by the Good Practice Guidance (GPG) published by the Nuclear Emergency Arrangements Forum (NEAF) [7] and made administrative amendments including updating reference to relevant legislation and renaming the document Topic Manual 019.
6. The ONR's approval will enable the licensee to update supporting documentation, including the Barrow Nuclear Emergency Orders (BNEO) document (Topic Manual 020) [8] that provides details of how the plan should be implemented.

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

7. I have assessed the changes to the emergency arrangements in Topic Manual 019 [2] and based on my assessment [9] & [10] consider the documentation consistent with ONR's expectations in the Safety Assessment Principles (SAPs) (e.g. AM.1) and Inspection Guidance NS-INSP-GD-011 [11]. I supplemented my assessment by meeting with the licensee to discuss the changes [12]. During this meeting, I confirmed with the licensee and nominated site inspector that the changes in Topic Manual 019 relate only to:
  - the revised nuclear licenced site boundary in [5];
  - enhancements based on RGP [13];
  - minor administrative amendments e.g. [14].
8. The licensee confirmed that there are no additional changes to the current site nuclear operations outwith of this submission that would require a change to the emergency arrangements. Similarly, there are no new hazards being introduced to the site at this

time that would change the extant Hazard Identification and Risk Evaluation. Therefore, the reference accident scenario postulated for the DDC licensed site remains valid.

9. I have confirmed that the changes have been subject to the licensee's due process, and have been considered by both the Nuclear Safety Committee (NSC) at the 190<sup>th</sup> meeting [15] and by the 84<sup>th</sup> meeting of the Site Emergency Planning Committee (SECP) [16]. The licensee confirmed that feedback received from these committees has been addressed where appropriate, with amendments incorporated within the submission [17]. I am content that the feedback has been appropriately addressed.
10. The updated emergency arrangements have been disseminated to other external stakeholders for feedback including the Defence Nuclear Safety Regulator (DNSR) [18] and Local Authority [19]. I discussed the updated emergency arrangements with my DNSR counterpart [20] who was broadly content with the updated arrangements. DNSR has raised no significant objection to ONR issuing the requested approval [21].
11. I have sampled the following aspects of the BNEO where Topic Manual 019 [2] makes specific reference to the more detailed arrangements therein, for the purpose of identifying any inconsistencies:
  - Dose levels for employees and employers with whom the Licensee has agreements and the arrangements for personnel dose assessment [22]
  - Nuclear Emergency Response Organisation (NERO) establishment for Reactor Safety Alert (RSA) & Off-site Nuclear Emergency (OSNE) [23]
  - Information dissemination to off-site stakeholders following establishment of Strategic Co-ordination Centre (SCC) for RSA & OSNE [24]
12. I found the BNEO was consistent with the overarching emergency plan for the sampled aspects [9]. I discussed the new section on dose levels in Topic Manual 019 [1] with a radiological protection inspector, who confirmed that this met their expectations [25].
13. Overall, I am content that the revised emergency arrangements in Topic Manual 019 [2] fulfil the requirements of LC11 based on my assessment and discussions. I expect the licensee to undertake a further review of the adequacy of the emergency arrangements when there is a change that potentially impacts the extant arrangements. For example, modification of the extant site accountability and access system [12], or when the site begins receiving reactors associated with the Dreadnought submarine programme. This review should proportionate to the change in hazard and undertaken ahead of implementation.

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

14. There are no regulatory issues or concerns resulting from this assessment. My sampling and associated discussions show that the changes to the document directly relate to the relicensing of the DDC site, and are administrative in nature. No consequential nuclear safety impact on the emergency arrangements has been identified. Based on my review and discussions with the ONR nominated site inspector, there are no additional operations (or changes to those operations) on the site since the previous arrangements were approved.
15. The DDC Topic Manual 019 [2] is underpinned by the BNEO [8]. I discussed update of the BNEO with the licensee, who confirmed that review of the BNEO is underway. The BNEO will be re-issued following ONR approval of the updated emergency arrangements. This re-issuing will be in accordance with the licensee due process.

## **5 CONCLUSIONS**

16. This report presents the findings of my assessment of the revised emergency arrangements in [2] submitted by BAE S Marine Limited for approval.
17. To conclude, I am satisfied that the revised emergency arrangements fulfil the requirements of LC11.

## **6 RECOMMENDATIONS**

18. This project assessment report recommends that approval is given under LC11(3) for the revised BAE Systems Marine Limited's emergency arrangements for nuclear site licence number 42C, DDC, detailed in Topic Manual 019 [2] and that Licence Instrument 519 be signed by the Deputy Chief Inspector (DCI).



## 7 REFERENCES

- [1] BAE Systems Marine Limited, Request for Approval of Changes to the Nuclear Site Emergency Plan - Topic Manual 019 (formerly NSRD/GR04-002), Letter NSRD/RC&I/MH/eDMS 1802442, 9 April 2019. CM9 2019/174636.
- [2] BAE Systems Submarines, Nuclear Site Emergency Plan, Topic Manual 019, Issue 1 Revision 0 08.10.2018 Draft B. CM9 2019/174625.
- [3] BAE Systems Submarines, Nuclear Site Emergency Plan, NSRD/GR04-002, eDMS reference: 1586217, Issue 2 Revision 4 16.01.2017. CM9 2019/174627.
- [4] ONR, Approval of Devonshire Dock Complex Emergency Plan, NSRD/GR04-002, 30 January 2017. CM9 2017/40876.
- [5] ONR, Nuclear Site Licence No. 42C - BAE Systems Marine Ltd - Devonshire Dock Complex, October 2018 - Document Number 1389. CM9 2018/319433.
- [6] ONR, Application for a New Nuclear Site Licence for the BAE Systems Marine Ltd, Devonshire Dock Complex Site, ONR-OFD-AR-18-018 Revision 0. CM9 2018/301539.
- [7] NEAF, Good Practice Guide - Contents of an Operators Emergency Plan, Version 1.1, December 2016. CM9 2019/174807.
- [8] BAE Systems Submarines, Barrow Nuclear Emergency Orders, Topic Manual 020.
- [9] Assessment of Devonshire Dock Complex LC11 Emergency Arrangements, April 2019. CM9 2019/174594.
- [10] Marked-up version of NSRD/GR04-002, CM9 2019/174714.
- [11] ONR, Technical Inspection Guide LC 11 – Emergency Arrangements, NS-INSP-GD-011 Revision 5.
- [12] Level 4 meeting with BAe Submarine Systems to discuss the updated Emergency Plan for Barrow and associated Licence Instrument, ONR-OFD-CR-19-003 Revision 0. CM9 2019/106650.
- [13] Email: RE: ONR-OFD-CR-19-003 - linked to the submission of the Nuclear Site Emergency Plan (Topic Manual 019), 24 April 2019. CM9 2019/174806.
- [14] FW: Request for Approval of Changes to the Nuclear Site Emergency Plan - Topic Manual 019 (formerly NSRD/GR04-002) - AIRSWEB ACTION 4308, April 2019. CM9 2019/174594.
- [15] BAE Systems Marine Limited, BAE Systems Marine Limited Nuclear Safety Committee, NSC 190 Minutes Issue 1, eDMS 1207212, 14 November 2018. CM9 2019/174640.
- [16] BAE Systems Submarines, Site Emergency Planning Committee Minutes of 84th Meeting - 2018 (SEPC-18-04), Workspace Ref. No. I6PXJP-DKFD-OPK-N60, 18 October 2018. CM9 2019/174652.
- [17] NSC Action 190.3, December 2018. CM9 2019/174815.
- [18] FW: Request for Approval of Changes to the Nuclear Site Emergency Plan - Topic Manual 019 (formerly NSRD/GR04-002) - AIRSWEB ACTION 4308, DNSR. CM9 2019/174818.
- [19] BAESS Emergency Plan For Comment, November 2018. CM9 2019/174814.
- [20] Meeting with the Defence Nuclear Safety Regulator to discuss BAE Systems Marine Ltd's updated emergency arrangements for Devonshire Dock Complex, Barrow-in-Furness (Nuclear site licence number 42C), ONR-OFD-CR-19-097 Revision 0. CM9 2019/141708.
- [21] Email - RE: BAE Systems - Barrow - Updated Emergency Arrangements, CM9 2019/187424.
- [22] BAE Systems Marine Limited, Barrow Nuclear Emergency Orders Section 9, Intervention Procedures & Emergency Exposures, CM9 2019/174809.

- [23] BAE Systems Marine Limited, Barrow Nuclear Emergency Orders Section 3, Nuclear Emergency Response Organisation, CM9 2019/174811.
- [24] BAE Systems Marine Limited, Barrow Nuclear Emergency Orders Section 11, External Interfaces, CM9 2019/174812.
- [25] Barrow Emergency Arrangements - Dose Levels, April 2019. CM9 2019/174817.