

**PROTECTIVE MARKING - NONE**

# **Office for Nuclear Regulation**

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**CIVIL NUCLEAR REACTOR PROGRAMME**

**NEW BUILD LICENSING**

**HINKLEY POINT C NUCLEAR SITE LICENSING**

**LICENCE CONDITION 11: EMERGENCY ARRANGEMENTS**

Assessment Report: ONR-CNRP-AR-12-121

Revision 1

11 January 2013

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**PROTECTIVE MARKING - NONE**

## ASSESSMENT REPORT

<b>Site:</b>	Hinkley Point C
<b>Project:</b>	NNB Generation Company Ltd's application for Nuclear Site licence to install and operate two EPR units at Hinkley Point C.
<b>Title:</b>	Licence Condition Compliance Arrangements Intervention.
<b>Licence Number:</b>	NA (Pre-licence granting)
<b>Licence Condition(s):</b>	LC11: Emergency arrangements
<b>IIS Rating:</b>	3
<b>COIN Service Order:</b>	N/A

### Document Identifier

Identifier	Revision	TRIM Reference(s)
ONR-CNRP-AR-12-121	1	2012/392467

### Step-based Document Review

Step	Description	Role	Name	Date	TRIM Revision *
1	Initial draft, including identification and mark-up of SNI/CCI	Author	[REDACTED]	15/10/2012	5
2	Main editorial review	Author	Not applicable		
3	Peer Review in accordance with AST/005 Issue 1	Peer Reviewer			
4	Assessor update / sentencing of comments and return to Peer Reviewer	Author			
5	Final editorial / clean draft review - Revision 0	Author	[REDACTED]	16/10/12	8
6	Acceptance review in accordance with AST/003 Issue 4	AUH			
7	Report Sign-off	Author / Peer Reviewer / AUH			

### Document Acceptance

Role	Name	Position	Signature	Date
Author	[REDACTED]	HM Inspector	[REDACTED]	16/10/2012
Peer Review				
Acceptance <sup>†</sup>	[REDACTED]	HM Superintending Inspector	[REDACTED]	16/10/2012

\* TRIM revision to be identified upon completion of activity and incorporation of any changes to document.

† Hard-copy of document signed-off, TRIM version updated with authors / approver / acceptor names and dates and record finalised.

# Office for Nuclear Regulation

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## ASSESSMENT REPORT

### Document Acceptance (Revision 1)

Role	Name	Position	Signature	Date
Author	[REDACTED]	HM Inspector	[REDACTED]	11/01/2013
Peer Review for Publication	[REDACTED]	HM Inspector	[REDACTED]	11/01/2013
Acceptance for Publication	[REDACTED]	HM Superintending Inspector	[REDACTED]	08/02/2013

### Revision History

Revision	Date	Author(s)	Reviewed By	Accepted By	Description Of Change
0	16/10/2012	[REDACTED]	N/A	[REDACTED]	First formal issue.
1		[REDACTED]	[REDACTED]	[REDACTED]	Minor editorial changes.

### Circulation (latest issue)

Organisation	Name
ONR	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]

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## EXECUTIVE SUMMARY

### Background and Scope.

NNB Generation Company Ltd (NNB GenCo) has formally applied to the Office for Nuclear Regulation (ONR) for a nuclear site licence (NSL) to install and operate two EPR™ reactor units at Hinkley Point C in Somerset.

This report presents the findings of ONR's assessment of NNB GenCo's arrangements for complying with Licence Condition 11: emergency arrangements. The assessment was informed by a programme of meetings and intervention spanning the period March 2011 to July 2012.

The scope of this report covers the adequacy of NNB GenCo's arrangements for complying with LC11: Emergency Arrangements; for the purposes of supporting its application for a nuclear site licence.

### Intervention Strategy

ONR has concluded a programme of intervention that has examined NNB GenCo's arrangements for complying with Licence Condition 11: Emergency arrangements. During the course of a programme of meetings ONR has engaged in dialogue which has informed improvements to the procedures that NNB GenCo intends to implement for responding to emergencies on the site. The intervention examined compliance procedures and the underlying compliance thread, training of personnel, implementation of arrangements and observation of demonstration exercises.

### Matter Arising

Recognising Hinkley Point C's proximity to Hinkley Point A and Hinkley Point B, NNB GenCo's has included arrangements for responding to either of the adjacent sites declaring an off-site emergency. These arrangements address the mustering and accounting for personnel, welfare of mustered personnel and evacuation.

### Conclusions of Intervention.

I conclude that:

NNB GenCo's procedure for establishing and maintaining emergency arrangements aims to secure an appropriate response to all foreseeable events and an agile response to non-foreseeable events arising during all phases of the development of Hinkley Point C.

NNB GenCo has developed a HPC Emergency Plan that:

- defines clear and relevant objectives for addressing site incidents that are foreseeable during the early stages of site preparation;
- describes the HPC Emergency Organisation charged with coordinating and implementing the site's response to a site incident;
- recognises the possibility of the adjacent nuclear licensed site declaring an Off-Site Nuclear Emergency;
- identifies the key command centre locations and also the need for both internal and external muster points.

NNB GenCo procedure for controlling regulator approved management arrangements provides adequate control of such part or parts the LC11 arrangements approved by the Executive.

NNB GenCo's arrangements for responding to a site incident are informed by appropriate consultation with those relevant local bodies and services whose assistance or co-operation is required.

NNB GenCo's arrangements for rehearsing its arrangements for responding to any foreseeable accident or emergency on the site are acceptable.

NNB GenCo's arrangements for responding to an accident or emergency on the site include acceptable arrangements for ensuring that all persons who have duties in connection with such arrangements are properly trained in:

- the performance of such duties; and,
-

- the use of any equipment required to perform such duties

By satisfactorily demonstrating its response to an adjacent nuclear licensed site declaring an Off-site Emergency as part of an exercise, NNB has also satisfactorily implemented emergency arrangements for responding to a site incident expected to occur during the early stages of site preparation.

**Recommendations.**

I recommend that:

ONR should accept that NNB GenCo's proposed arrangements for complying with Licence Condition 11: Emergency arrangements are adequate for the purpose of granting a nuclear site licence.

Following granting of a nuclear site licence for Hinkley Point C, ONR should continue dialogue with NNB GenCo on the evolution of its emergency arrangements as the project progresses from early site preparation works to construction, commissioning and operations. This dialogue will form part of ONR's future intervention strategy.

**LIST OF ABBREVIATIONS**

<b>ALARP</b>	<i>As low as is reasonably practicable</i>
<b>BSL</b>	<i>Basic Safety Level (in SAPs)</i>
<b>BSO</b>	<i>Basic Safety Objective (in SAPs)</i>
<b>BMS</b>	<i>(ONR) How2 Business Management System</i>
<b>DEPZ</b>	<i>Detailed Emergency Planning Zone</i>
<b>EPCC</b>	<i>Emergency Planning Consultative Committee</i>
<b>EPR™</b>	<i>Trade Mark for the European pressurised water reactor</i>
<b>ESLG</b>	<i>Emergency Services Liaison Group</i>
<b>HPC</b>	<i>Hinkley Point C</i>
<b>HSE</b>	<i>Health and Safety Executive (“the Executive”)</i>
<b>IAEA</b>	<i>International Atomic Energy Agency</i>
<b>LC</b>	<i>Licence Condition</i>
<b>ONR</b>	<i>Office for Nuclear Regulation (an agency of HSE)</i>
<b>NNB</b>	<i>NNB Generation Company Ltd</i>
<b>PCER</b>	<i>Pre-construction Environment Report</i>
<b>PCSR</b>	<i>Pre-construction Safety Report</i>
<b>PID</b>	<i>Project Initiation Document</i>
<b>PSA</b>	<i>Probabilistic Safety Assessment</i>
<b>PSR</b>	<i>Preliminary Safety Report</i>
<b>RGP</b>	<i>Relevant Good Practice</i>
<b>REPPIR</b>	<i>Radiation (Emergency Preparedness and Public Information) Regulations 2001</i>
<b>SAP</b>	<i>Safety Assessment Principle(s) (HSE)</i>
<b>SFAIRP</b>	<i>So far as is reasonably practicable</i>
<b>SSC</b>	<i>System, Structure and Component</i>
<b>TAG</b>	<i>Technical Assessment Guide(s) (ONR)</i>
<b>TSC</b>	<i>Technical Support Contractor</i>
<b>WENRA</b>	<i>Western European Nuclear Regulators’ Association</i>

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Arrangements

## 1 INTRODUCTION

### 1.1 Background

1 NNB Generation Company Ltd (NNB GenCo) has formally applied to ONR for a nuclear site licence (NSL) to install and operate two EPR™ reactor units at Hinkley Point C (HPC) in Somerset (Ref. 1).

2 This report presents the findings of ONR's assessment of NNB GenCo's arrangements for complying with Licence Condition (LC) 11: Emergency arrangements. The assessment was informed by a programme of meetings and intervention spanning the period March 2011 to July 2012. Assessment was undertaken in accordance with the requirements of the Office for Nuclear Regulation (ONR) How2 Business Management System (BMS) procedure AST/003 (Ref. 2).

### 1.2 Scope

3 The scope of this report covers the adequacy of NNB GenCo's arrangements for complying with LC11: Emergency arrangements; for the purposes of supporting its application for a nuclear site licence.

### 1.3 Methodology

4 The methodology for the assessment follows ONR BMS document AST/003, Assessment Process (Ref. 2), in relation to mechanics of assessment within the Office for Nuclear Regulation (ONR).

5 This assessment focused upon NNB GenCo's arrangements for emergency arrangements, development of the arrangements, identification and training of key personnel, implementation of arrangements and observation of demonstration exercises.

## 2 ASSESSMENT STRATEGY

6 The assessment strategy for NNB GenCo's arrangements for complying with LC 11: Emergency arrangements; is set out in this section. This identifies the scope of the assessment and the standards and criteria that have been applied.

### 2.1 Standards and Criteria

7 The relevant standards and criteria adopted within this assessment are set down in the ONR inspection guide T/INS/011 (Ref. 3), which identifies relevant related inspection guidance.

8 The assessment is also informed by the recently published guidance "Licensing Nuclear Installations (Ref. 4) as well as relevant good practice exercised by mature licensees.

### 2.2 Intervention Strategy

9 The assessment followed ONR's Intervention Strategy (Ref. 5), and was informed by a programme of Level 4 dialogue which aimed to examine:

- NNB compliance matrix and compliance thread for each condition sub clause;
- communication of arrangements to relevant personnel, i.e. training;
- implementation of arrangements;
- dialogue on licensees self regulation activities.

10 The intervention gave particular attention to:

- the arrangements for controlling construction and installation activities;
- the arrangements for dividing the construction and installation phase into stages;
- the arrangements for controlling progress from one stage to the next.

### 2.3 Integration with other licence Conditions

11 LC09: Instructions to persons on the site; requires every person authorised to be on the site to receive instructions on the action to be taken in response to an emergency or accident on the site.

12 LC10: Training; requires the licensee to make and implement arrangements for the training of all those staff that have responsibilities for any operations which may affect safety. A site's emergency organisation is clearly responsible for activities/operations which may affect safety and thus LC10 is relevant to the training of personnel in a licensee's emergency organisation.

### 2.4 Out-of-scope Items

13 None identified.

**3 LICENSEE'S SAFETY CASE**

- 14 NNB GenCo's is not required to present a formal safety case for its arrangements for complying with conditions attached to the nuclear site licence.
- 15 Part 4 the application ( Ref. 1) entitled Nuclear Site Licence Compliance Matrix: Hinkley Point C (Ref. 5) identifies those procedures and documents within NNB GenCo's Integrated Management System (IMS) that achieve compliance with the licence conditions attached to the standard nuclear site licence. The Compliance Matrix identifies two groups of licence conditions.
- Group 1 – Licence Conditions required for activities that NNB GenCo expect to undertake during the construction and installation phases of the project. ONR expect the arrangements for these LCs to be developed sufficiently to be fit for purpose at the time of NSL granting.
  - Group 2 – Licence Conditions required for activities that NNB GenCo will undertake during commissioning, operation and decommissioning phases of the project. NNB GenCo has provided a commitment to develop the necessary arrangements for complying with these LCs in the future.
- 16 LC 11: Emergency arrangements; is designated Group 1 and therefore ONR expects NNB GenCo to have fit for purpose arrangements at the time of NSL grant.

## 4 ONR ASSESSMENT

### 4.1 Scope of Assessment Undertaken

17 The aim of the intervention that informed this assessment was to judge the adequacy of NNB GenCo's arrangements for dealing with any accident or emergency arising on the site and their effects. The principal objective is to inform ONR's decision on whether to grant NNB GenCo a nuclear site licence. Thus ONR's intervention strategy (Ref. 5) comprises the following elements.

- Development of arrangements. Examine NNB GenCo's Compliance matrix entries (procedures) and the underlying compliance thread (supporting arrangements, guidance etc.).
- Competence and Training. Examine the arrangements for developing training material and identifying the target roles and functions. Sample training packages and observe training.
- Implementation. Seek opportunities to inspect implementation of arrangements.
- Self Regulation. Discuss key findings and lessons learned from the licensee's own self assessment of its arrangements.

18 The extent of ONR's consideration of the above elements is dependent upon NNB GenCo's project schedule. NNB GenCo is currently undertaking early preparation of the site which includes: remediation of asbestos contaminated land, erection of the perimeter fence, archaeological excavations, and erection of site administration and security buildings. Therefore, ONR's intervention examined development of arrangements, a limited examination of competency and training and observation of demonstration exercises.

19 ONR's assessment was informed by dialogue with NNB GenCo during the course of the programme of L4 meetings listed at Table 1.

20 ONR attended two demonstrations of HPC arrangements for responding to Hinkley Point B's Central Control Room declaring an Off-Site Nuclear Emergency as part of an exercise. The letters listed at Table 2 record ONR's observations of these exercises.

### 4.2 Assessment

#### 4.2.1 Development of Arrangements – Compliance Matrix and Compliance Thread

21 ONR guidance (Ref. 3) expects a licensee's arrangements for complying with LC11 to: provide an effective response to accidents or emergencies arising on the site; facilitate consultation with persons or services whose co-operation or assistance is required to discharge the arrangements; ensure that the arrangements are rehearsed; and that persons having duties in connection with the arrangements to be properly trained in procedures and the use of any equipment required. Table 3 lists the NNB GenCo procedures that comprise its arrangements for complying with LC11.

##### 4.2.1.1 LC11(1).

22 The compliance matrix identifies the following key document describing the arrangements for compliance with LC11(1).

- Establish and Maintain Emergency Arrangements.
- HPC Emergency Plan.

- 23 NNB GenCo recognises that during the construction, installation and commissioning stages of the development of HPC the hazards and risks to site personnel will vary according to the project schedule. Thus the procedure “Establish and Maintain Emergency Arrangements” aims to ensure that at any point during the project the emergency arrangements provide the basis for a flexible response to all reasonably foreseeable events and also include for contingencies that will help to provide the basis of an agile response to non-reasonably foreseeable events. Key inputs to the procedure include: external and internal operating experience, guidance or advice from regulators and public bodies, contractors’ method statements and risk assessments and the project schedule of work. These inform a review of the arrangements which, in turn, informs an assessment of the impact upon: the capability and competence of emergency response personnel; the associated facilities and equipment; the emergency plan and emergency handbook; the exercise schedule and communication to both internal and external stakeholders, e.g. public information (REPPiR).
- 24 **ONR judges that NNB GenCo’s procedure for establishing and maintaining emergency arrangements aims to secure an appropriate response to all foreseeable events and an agile response to non-foreseeable events arising during all phases of the development of Hinkley Point C.**
- 25 The “HPC Emergency Plan” is the principle reference that sits at the root of a suite of documents that set out how the site responds to emergencies. The plan assigns activities and responsibilities to the site’s emergency organisation to achieve the following objectives.
- To activate the site emergency arrangements
  - To issue appropriate warnings at the correct time and ensure the safe withdrawal of all persons on site to pre-arranged assembly points.
  - To notify rapidly all persons and external organisations concerned with implementing remedial actions
  - To assemble and deploy, when necessary, emergency teams to assess and minimise the consequences of the accident.
  - To assess the risk and extent of any potentially hazardous situation and ensure timely advice is given on appropriate measures to safeguard Site personnel
  - To protect the environment.
- 26 In fulfilling these objectives the plan aims to ensure that the emergency organisation is capable of implementing whatever action is required to prevent visitors and site personnel being exposed to a significant risk to their health from an incident on the site or a radiological release from an adjacent licensed site, i.e. Hinkley Point A (HPA) or Hinkley Point B (HPB).
- 27 During the construction and non-active commissioning stages of the project incidents on the HPC site are unlikely to lead to declaration of an off-site nuclear emergency. The most likely cause of an incident on the site is from transportation or construction activities and the foreseeable outcomes of such an emergency are:
- personal injury;

- drowning from an accident during work above or on water, e.g. the sea;
- damage to buildings/facilities from fire, flooding or adverse weather;
- lost time incident.

- 28 The plan defines a Site Incident as a “hazardous condition which is confined in its effect to within the site boundary”. Not all on-site emergencies will require HPC to implement its emergency arrangements. However, if, following an incident, it is suspected that normal control and management of the site cannot be maintained then the Emergency Coordinator will declare a Site Incident and the emergency organisation described in the Emergency Plan is responsible for responding effectively to the specific circumstances of the emergency.
- 29 The plan recognises the possibility of the adjacent nuclear licensed site declaring an Off-Site Nuclear emergency. In the event of such an emergency the HPC emergency organisation will be responsible for accounting for the safety and welfare of all personnel and visitors present on the development site. Thus the plan requires the emergency organisation to respond by: instructing all personnel to seek shelter at designated internal muster stations; accounting for all personnel and visitors including, where necessary, search and recovery; liaising with the HPA or HPB emergency organisation; managing the welfare of all personnel on the site and co-ordinating evacuation of the site.
- 30 The HPC Emergency Plan references the HPC Emergency handbook which details the warning announcements, alarms, internal and external muster stations and other incident specific information required to inform the emergency organisation’s response. This handbook is maintained via the Establish and Maintain Emergency Arrangements procedure and the list of foreseeable site incidents will be informed by the schedule of project activities.
- 31 The Emergency Plan describes the HPC Emergency Organisation which comprises:
- Emergency Coordinator (EC) – a senior member of the site staff in overall command of the site emergency organisation and available on 24 hour stand-by rota;
  - Assistant Emergency Coordinator ;
  - Security Team Leader (Shift) - responsible to the EC for any security issues and for receipt of emergency services.
  - Senior Person – personnel trained in the co-ordination of a muster station. In the event that HPB declare an Off-Site Nuclear Emergency the EC will authorise the Senior Person to instruct all personnel to take potassium iodate tablets.
- 32 The EC will also be able to call upon trained personnel to form Emergency Response Teams to conduct an initial assessment of the incident, administer first aid, and conduct search and recovery. The EC shall appoint a member of the site’s security team as an Emergency Services Liaison Officer (ESLO) to direct emergency service to the appropriate location via a safe route.
- 33 NNB has established an interim Emergency Control Centre (ECC) and development of the site infrastructure includes a dedicated ECC, a separate Construction Emergency Control Centre, and additional muster stations as the number of personnel on site increases.
- 34 **ONR is satisfied that that NNB GenCo has developed a HPC Emergency Plan that:**

- defines clear and relevant objectives for addressing site incidents that are foreseeable during the early stages of site preparation;
- describes the HPC Emergency Organisation charged with coordinating and implementing the site's response to a site incident;
- recognises the possibility of the adjacent nuclear licensed site declaring an Off-Site Nuclear Emergency;
- identifies the key command centre locations and also the need for both internal and external muster points.

#### 4.2.1.2 LC11(2) and LC11(3).

35 These LCs give the Executive primary powers to approve arrangements. The compliance matrix refers to the procedure for control of regulator approved management arrangements.

36 **ONR is satisfied that the NNB GenCo procedure for controlling regulator approved management arrangements provides adequate control of such part or parts the LC11 arrangements approved by the Executive.**

#### 4.2.1.3 LC11(4).

37 This sub-clause requires the licensee to consult with local authorities, persons or services whose assistance or cooperation is required to expedite its emergency arrangements. The compliance matrix references the NNB GenCo procedure Establish and Maintain Emergency Arrangements as the basis for compliance with this requirement.

38 Procedure Step 1.1; Review and Analyse Emergency Planning Inputs; includes the requirements: to engage with external organisations and regulators and, for providing advice to those off-site organisations who have responsibility for protecting the public.

39 Procedure Step 1.5; Undertake meetings or communicate with external agencies; requires the site to communicate its emergency arrangements, and any subsequent changes, to external agencies who are required to be aware.

40 NNB has initiated dialogue with the emergency services via attendance at the Emergency Services Liaison Group (ESLG). This meeting, a sub-group reporting to the Emergency Planning Consultative Committee (EPCC), is attended by the local blue light services and discusses their role in an incident, their reception at the site during an incident and any communication issues. The meeting is informed by learning from emergency exercises. HPC confirmed that it will be attending future meetings of the ESLG.

41 NNB GenCo has attended a meeting hosted by EDF Nuclear Generation Ltd's Emergency Planning Group to discuss the impact of the HPC project upon the off-site emergency plan for HPA and HPB. Somerset County Council and Suffolk County Council, the REPPIR duty holders responsible for the off-site plans for Hinkley Point and Sizewell attended the meeting which discussed: the NNB GenCo commitment to seek a review of the off-site plan before the development site population exceeded 1000; the evacuation of visitors to the Public Information Centre, the evacuation routes for personnel on the HPA and HPB licensed sites and HPC development site and the potential conflict with evacuation of residents within the DEPZ. NNB GenCo will attend future meetings of the group.

42 NNB GenCo is also committed to participating in future meetings of the EPCC.

43 **ONR concludes that NNB GenCo's arrangements for responding to a site incident are informed by appropriate consultation with those relevant local bodies and services whose assistance or co-operation is required.**

#### 4.2.1.4 LC11(5).

44 This sub-clause requires the licensee to rehearse its arrangements. The compliance matrix references the NNB GenCo procedure "Plan and Administer HPC Emergency Exercises" and the "HPC Emergency Exercise Rota". In addition to participating in Hinkley Point B's Level 1 demonstration exercises, NNB GenCo has scheduled a number of full site exercises of its emergency arrangements to coincide with significant increases in the number of personnel on site.

45 **ONR is satisfied that NNB GenCo's arrangements for rehearsing its arrangements for responding to any foreseeable accident or emergency on the site are acceptable.**

46 ONR has attended two full demonstrations of NNB GenCo's emergency response and these are discussed at Section 4.2.2 below.

#### 4.2.1.5 LC11(6).

47 This sub-clause requires the licensee to ensure that all personnel who discharge duties in connection with its emergency arrangements are properly trained. The Compliance Matrix references the procedure "Establish and Maintain Emergency Arrangements". Step 1.2 of the procedure addresses the selection and training of emergency response personnel. The activity refers to detailed guidance covering training for emergency response, first aid and fire prevention/safety. Training is implemented via the company procedure "Management of Training" (LC10).

48 NNB has completed an initial training needs analysis (TNA) which informed development of the training for the Emergency Coordinator and Security Team Leader roles. NNB GenCo is scheduled to complete a more detailed TNA that will inform further development of the training for its emergency organisation before proceeding beyond the initial site preparation works.

49 In addition to appointing Emergency Coordinators, Security Team Leaders and Senior Persons into the HPC Emergency Organisation, NNB GenCo has appointed a company Emergency Preparedness Lead, and HPC Emergency Preparedness Lead.

50 **ONR is satisfied that NNB GenCo's arrangements for responding to an accident or emergency on the site include acceptable arrangements for ensuring that all persons who have duties in connection with such arrangements are properly trained in:**

- the performance of such duties; and,
- the use of any equipment required to perform such duties.

#### 4.2.1.6 Competence and Training

51 NNB GenCo's arrangements for Licence Condition 09: Instructions to persons on the site; requires all persons authorised to be on the site to have undergone site induction training. This training covers action to be taken in response to an emergency or accident and includes: warning signals (fire and nuclear), remote working, mustering (fire and clear), instruction on when and how to take potassium iodate tablets and conduct of mustered personnel.

**4.2.1.7 Comparison with Guidance and Relevant Good Practice**

- 52 ONR has assessed NNB GenCo's arrangements for Licence Condition 11: Emergency Arrangements; against the requirements of the ONR Technical Inspection Guide T/INS/011 (Ref. 3).
- 53 ONR judges that NNB arrangements have addressed the expectations of the ONR guidance for a nuclear licensed site preparing to commence construction of a new facility.

**4.2.2 Implementation of LC11 Arrangements**

- 54 ONR has attended two full demonstrations of NNB GenCo's response to Hinkley Point B's Central Control Room (CCR) declaring an Off-Site Nuclear Emergency as part of an exercise. Table 2 lists the letters that record ONR's observations and identify examples of good practice and also learning opportunities. ONR judged both exercises provided satisfactory demonstrations of NNB GenCo's arrangements for responding to HPB declaring an Off-Site Nuclear Emergency. In particular, ONR observed that the personnel performing the roles of Emergency Coordinator, Security Team Leader and Senior Person all performed satisfactorily. The second exercise demonstrated that NNB had taken valuable learning from the first exercise with ONR noting improvement in the search and recovery of missing persons as well as better consideration given to the welfare of mustered personnel.
- 55 **ONR concludes that by satisfactorily demonstrating its response to an adjacent nuclear licensed site declaring an Off-Site Emergency during its annual demonstration. NNB has also satisfactorily implemented emergency arrangements for responding to a site incident during the early stages of site preparation.**

## 5 CONCLUSIONS AND RECOMMENDATIONS

56 ONR has concluded a programme of intervention that has examined NNB GenCo's arrangements for complying with Licence Condition 11: Emergency Arrangements. During the course of a programme of meetings ONR has engaged in dialogue, and also observed demonstration exercises, which have informed improvements to the procedures that NNB GenCo now intends to implement for controlling construction and installation of a two unit EPR™ at Hinkley Point C. The intervention has informed ONR's judgement on the adequacy of NNB GenCo's proposed arrangements and lead to the following conclusions and recommendations.

### 5.1 Conclusions

57 ONR judges that NNB GenCo's procedure for establishing and maintaining emergency arrangements aims to secure an appropriate response to all foreseeable events and an agile response to non-foreseeable events arising during all phases of the development of Hinkley Point C.

58 ONR is satisfied that NNB GenCo has developed a HPC Emergency Plan that:

- defines clear and relevant objectives for addressing site incidents that are foreseeable during the early stages of site preparation;
- describes the HPC Emergency Organisation charged with coordinating and implementing the site's response to a site incident;
- recognises the possibility of the adjacent nuclear licensed site declaring an Off-Site Nuclear Emergency;
- identifies the key command centre locations and also the need for both internal and external muster points.

59 ONR is satisfied that the NNB GenCo procedure for controlling regulator approved management arrangements provides adequate control of such part or parts the LC11 arrangements approved by the Executive.

60 ONR concludes that NNB GenCo's arrangements for responding to a site incident are informed by appropriate consultation with those relevant local bodies and services whose assistance or co-operation is required.

61 ONR is satisfied that NNB GenCo's arrangements for rehearsing its arrangements for responding to any foreseeable accident or emergency on the site are acceptable.

62 ONR is satisfied that NNB GenCo's arrangements for responding to an accident or emergency on the site include acceptable arrangements for ensuring that all persons who have duties in connection with such arrangements are properly trained in:

- the performance of such duties; and,
- the use of any equipment required to perform such duties

63 ONR concludes that by satisfactorily demonstrating its response to an adjacent nuclear licensed site exercising its Emergency Plan, NNB has also satisfactorily implemented emergency arrangements for responding to a site incident during the early stages of site preparation.

## 5.2 Recommendations

64 This intervention makes the following recommendations.

- ONR should accept that NNB GenCo's proposed arrangements for complying with Licence Condition 11: Emergency arrangements; are adequate for the purpose of granting a nuclear site licence.
- Following granting of a nuclear site licence for Hinkley Point C, ONR should continue dialogue with NNB GenCo on the evolution of its emergency arrangements as the project progresses from early site preparation works to construction, commissioning and operations. This dialogue will form part of ONR's future intervention strategy.

**6 REFERENCES**

- 1 NNB GenCo letter ONR-OSL-RIO-000061 dated 29 July 2012. Application for Nuclear Site Licence for Hinkley Point. TRIM 2011/442090
- 2 *ONR How2 Permissioning Reports*. AST/003 Issue 4. HSE. August 2011.  
[www.hse.gov.uk/nuclear/operational/assessment/index.htm](http://www.hse.gov.uk/nuclear/operational/assessment/index.htm).
- 3 T/INS/011 Issue 1 LC11: Emergency arrangements..  
[http://www.hse.gov.uk/nuclear/operational/tech\\_insp\\_guides/ns-insp-gd-011.pdf](http://www.hse.gov.uk/nuclear/operational/tech_insp_guides/ns-insp-gd-011.pdf)
- 4 ONR publication Licensing Nuclear Installations. June 2012  
<http://www.hse.gov.uk/nuclear/licensing-nuclear-installations.pdf>
- 5 CNRP New Civil Reactor Build. NNB GenCo Ltd's Application for a Nuclear Site Licence to Install and Operate Two EPR Reactor Units at Hinkley Point. ONR Intervention Strategy. TRIM 2012/61973.
- 6 NNB GenCo Company Document Nuclear Site Licence Compliance Matrix: Hinkley Point C. NNB-OSL-PRO-000046, (Part 4 to Ref. 1).

**Table 1**

**Level 4 Meetings and Interventions to Discuss LC11: Emergency Arrangements**

Date	Location	Topic	CR/IR No.	TRIM Ref.
Pre-NSL Application				
23/03/11	HPC	LC11 Emergency Arrangements	CR11093	2011/267966
Post-NSL Application				
25/01/12	HPC	Demonstrate NNB LC11 compliance for ONR NSL intervention purposes	IR12250	2012/62406
21/03/12	HPC	Demonstrate NNB LC11 compliance for ONR NSL intervention purposes	IR12051	2012/145154
22/05/12	HPC	Demonstrate NNB LC11 compliance for ONR NSL intervention purposes	IR12114	2012/227381
26/07/12	HPC	LC11 Emergency Arrangements – HPC NSL Application intervention closure meeting.	IR12170	2012/351922

**Table 2**

**ONR observations of Demonstration Emergency Exercises.  
HPC response to HPB Declaration of Off-Site Nuclear Emergency**

Exercise Date	HPB Exercise Name	Letter Title	ONR Unique No.	TRIM Ref.
05/12/11	PIKE	Hinkley Point B – Exercise Pike – 5 December 1011	HPB71704N	2011/640137
18/04/12	BARBEL	Hinkley Point B – Exercise Barbel – 18 April 2012	HPB71708N	2012/169038

<b>Table 3</b> <b>Licence Condition 11: Emergency Arrangements</b> <b>NNB GenCo Compliance Arrangements</b>		
LC Clause	NNB GenCo Procedure	Document Reference
11(1)	Establish and maintain Emergency Arrangements	NNB-OSL-PRO-000039
	HPC Emergency Plan	NNB-OSL-PLN-000011
11(2)	Control Regulator Approved Management Arrangements	NNB-FIN-PRO-000079
11(3)	Control Regulator Approved Management Arrangements	NNB-FIN-PRO-000079
11(4)	Establish and maintain Emergency Arrangements	NNB-OSL-PRO-000039
11(5)	Plan and Administer Hinkley Point C emergency Exercises	NNB-OSL-PRO-000089
	HPC Emergency Exercise Rota	NNB-OSL-MAT-000047
	Manage Interfaces with Regulators	NNB-OSL-PRO-000061
11(6)	Establish and maintain Emergency Arrangements	NNB-OSL-PRO-000039