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Civil Nuclear Security

Hinkley Point C – Nuclear Site Licensing - Security

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ASSESSMENT REPORT

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EXECUTIVE SUMMARY

This report presents the assessment findings of the security assessment in relation to the EdF NNB Hinkley Point C (HPC) Licensing application.

The assessment has been mainly directed to those areas where the Licence conditions have an impact on security or security can contribute to meeting or influencing the Licence conditions. However, as part of the proposed HPC site is currently licensed to EDF Nuclear Generation Hinkley Point B Nuclear Power Station, ONR CNS has vires through the Nuclear Industries Security Regulations 2003 (as amended) and work has been undertaken to ensure that throughout this licensing activity EdF NNB has been compliant with existing regulations.

The scope of the security assessment for HPC has concentrated on aspects of LC2, site plans, the Construction Site Security Plan, the Conceptual Security Arrangements for the UK European Pressurised-water Reactor and LC11 arrangements.

EdF NNB will need to demonstrate that it has robust processes to manage design changes and construction activity, as it relates to security, throughout the construction phase (Recommendations 2 to 4).

I am broadly satisfied with the progress that EdF NNB has made in addressing security issues as they relate to nuclear site licensing considerations.

My recommendations are as follows.

- **Recommendation 1:** EdF NNB can be issued a nuclear site license, from a security perspective.
- **Recommendation 2:** EdF NNB and its Architect Engineer must demonstrate that they have a clear and robust process to ensure that the Conceptual Security Arrangements for the UKEPR will be kept up to date through design changes during construction.
- **Recommendation 3:** EdF NNB must demonstrate that it has a clear and robust process to ensure that approved site security arrangements are not compromised during construction activities on the site.
- **Recommendation 4:** EdF NNB must demonstrate that it has an effective and robust process to ensure that the planned security site layout is not compromised during site development.

LIST OF ABBREVIATIONS

CNI	Civil Nuclear Industry
CNS	Civil Nuclear Security
CSA	Conceptual Security Arrangements
CSSP	Construction Site Security Plan
CWP/G8	Classification Policy: Information Concerning the Use, Storage and Transport of Nuclear and Other Radioactive Material
EDF	Electricité de France SA
EDF and AREVA	Electricité de France SA and AREVA NP SAS
EDF NG	EDF Energy Nuclear Generation
EPR	European Pressurised-water Reactor
GDA	Generic Design Assessment
HPC	Hinkley Point C
HSE	Health and Safety Executive
IAEA	International Atomic Energy Agency
LC	Licence Condition
NIMCA	Nuclear Industries Malicious Capabilities Planning Assumptions
NISR 2003	Nuclear Industries Security Regulations 2003 (as amended)
NM	Nuclear Material
NNB	New Nuclear Build (an EDF company)
NORMS	National Objectives, Requirements and Model Standards
ONR	Office for Nuclear Regulation (an agency of HSE)
ORM	Other Radioactive Material
RGP	Relevant Good Practice
SSP	Site Security Plan
TRD	Technical Requirements Document

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1 INTRODUCTION

1 A security assessment has been undertaken on the Electricité de France SA (EDF) New Nuclear Build (NNB) security proposals and arrangements for Hinkley Point C (HPC) as part of the assessment of its Licensing application.

2 Although security has not, until recently been an explicit license requirement, there are implicit requirements that link licence conditions (LC) with security arrangements. Primarily, LC2: Marking of the site boundary and LC11: Emergency arrangements. LC16: Site plans, designs and specifications, LC19: Construction or installation of new plant, LC20: Modification to design of plant under construction, and LC36: Organisational capability are all relevant to the delivery and maintenance of security and therefore have been influenced by and have influences on the security assessment.

1.1 Background

3 This report presents the findings of the assessment of Civil Nuclear Security in relation to Hinkley Point C. The assessment has been mainly directed to those areas where the Licence conditions have an impact on security or security can contribute to meeting or influencing the Licence conditions.

4 However, as part of the proposed Hinkley Point C site is currently licensed to EDF Nuclear Generation (EDF NG) Hinkley Point B Nuclear Power Station, ONR CNS has vires through the Nuclear Industries Security Regulations 2003 (as amended) (NISR 2003) to require NNB to have an approved Construction Site Security Plan (CSSP), as an annex to the approved Hinkley Point B Site Security Plan (SSP). Assessment work was undertaken on the development, refinement and approval of the CSSP.

1.2 Scope

5 This assessment report covers aspects of LC2, Site plans and the Construction Site Security Plan (CSSP) for HPC, the Conceptual Security Arrangements (CSA) for the UK European Pressurised-water Reactor (EPR) and LC11 arrangements.

1.3 Methodology

6 The methodology for the assessment concentrated on ensuring that the procedures and processes EDF NNB puts in place to manage its security and security issues, amend and maintain its CSSP, and address the interaction of security with other parts of its business is consistent with relevant good practice (RGP).

7 This assessment has been focussed primarily on Site Plans, the Construction Site Security Plan and the Conceptual Security Arrangements for the UKEPR.

2 ASSESSMENT STRATEGY

8 The intended security assessment strategy for Hinkley Point C 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

9 The relevant standards and criteria adopted within this assessment are principally the Security policy documents published by ONR CNS, or its predecessor (Ref. 2), relevant national and international standards and relevant good practice informed from existing practices adopted on UK nuclear licensed sites. The key security policy documents are detailed within this section. National and international standards and guidance have been referenced where appropriate within the assessment report. Relevant good practice, where applicable, has also been cited within the body of the assessment.

2.2 Security Related Documentation

10 The key security related documentation applied within the assessment are included within Table 1 of this report.

2.2.1 Security Related Policy Documents considered during this Assessment

11 The following protectively marked security related documents have been considered during this assessment (Refs. 1, 2, 3 and 4):

- Nuclear Industries Malicious Capabilities Planning Assumptions
- Technical Requirements Document²
- Classification Policy
- Security Policy Framework

2.2.2 National and International Standards and Guidance

12 The following international standards and guidance have been used as part of this assessment (Ref 5):

- IAEA Nuclear Security series Number 13: Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5).

2.3 Use of Technical Support Contractors

13 No external Technical Support Contractors were used during this assessment.

2.4 Integration with other Assessment Topics

14 ONR (CNS) has interacted with other assessment areas during the Security Assessment by discussing areas of common interest. Those were the work streams dealing with License Conditions 2 and 11

² Minimum Standards for the Physical Protection of Civil Licensed Nuclear Sites, Other Nuclear Premises and Nuclear Material in Transit

2.5 Out-of-scope Items

15 There are no out-of-scope items from this assessment.

3 LICENSEE'S SAFETY CASE

16 The Licensee's safety case is not relevant to the security assessment for the licensing of Hinkley Point C.

4 ONR ASSESSMENT

17 This assessment has been carried out looking for relevant good practice in the processes, procedures and approaches EDF NNB use to manage security for and at HPC.

4.1 Scope of Assessment Undertaken

18 The scope of the security assessment for Hinkley Point C as it relates to ONR Licensing Activity has concentrated on aspects of LC2, site plans, the Construction Site Security Plan (CSSP) for HPC, the Conceptual Security Arrangements (CSA) for the UK European Pressurised-water Reactor (EPR) and LC11 arrangements.

4.2 Assessment – Security Aspects of Licence Condition 2

19 License Condition 2 is concerned with the marking of the site boundary.

20 The security assessment has mainly interacted with Licence Condition 2.1 that requires the licensee to make and implement arrangements to prevent unauthorised persons from entering the site, and Licence condition 2.4 that requires the licensee to mark the boundary and where fences are used that they are adequately maintained.

4.3 Comparison with Standards, Guidance and Relevant Good Practice

21 The development of access control arrangements to prevent unauthorised access to the security controlled area of the licensed site and their subsequent approval in the Construction Site Security Plan has demonstrated measures to meet LC2.1.

22 Where the security boundary will be co-incident with the licensed site then measures to maintain the integrity of that barrier, approved in the CSSP, will address aspects of LC2.4.

4.4 Assessment – Site Plans

23 Site Plans have been submitted for consideration throughout the assessment. The correct security marking has been applied to the site plans, in accordance with the ONR CNS issued classification policy document (CWP/G8). They have been given supplier reference numbers, so that each is uniquely identified, scale information is identifiable and revision information is often included.

24 The main purpose of reviewing submitted site plans from an ONR CNS assessment perspective is to be aware of the site layout at the completed and intermediate stages of the Hinkley Point C construction project. In particular, the associated security measures, such as fences and buildings, that will be in place and construction issues that may affect the security of the site or a particular Unit.

4.5 Comparison with Standards, Guidance and Relevant Good Practice

25 As already mentioned, the site plans have unique numbers, the correct security markings and a recognised scale. Some drawings have building numbers and their function identified to aid understanding.

26 Thus, the drawings have been produced following relevant good practice, and meeting the standards of company draughting.

4.6 Assessment – Construction Site Security Plan

27 The Construction Site Security Plan (CSSP) for the` proposed EdF NNB Hinkley Point C site fell under ONR CNS regulatory vires, through the Nuclear Industries Security Regulations 2003 (as amended), as part of its proposed licensed site is on the EdF EN Hinkley Point B licensed site.

28 The HPC CSSP was therefore approved as an annex to the extant approved Site Security Plan for Hinkley Point B nuclear power station.

4.7 Comparison with Standards, Guidance and Relevant Good Practice

29 Annex B to Chapter 2 of Part Seven of the Technical Requirements Document has a specimen layout for a Construction Site Security Plan. The Construction Site Security Plan submitted by EdF NNB and approved on 10 January 2012 followed the specimen layout and was of an equivalent standard to other approved Site Security Plans (SSP). It also articulated how the security measures would evolve throughout the different phases of the project.

30 The detail in the later sections, towards the end of construction, were less developed than the earlier phases, as expected, but were indicative that EdF NNB are considering how the threats, risks and issues will change throughout the project.

4.8 Assessment – Conceptual Security Arrangements for the UKEPR

31 The Conceptual Security Arrangements for the UKEPR were assessed during Step 4 of the Generic Design Assessment (GDA) process. Those arrangements were developed by the Requesting Parties, EDF and AREVA, and were deemed to provide a robust and acceptable submission that met the regulatory requirements.

32 The security assessment in this area looked at how EDF NNB was developing processes and working arrangements to use the CSA to develop their security arrangements that fed into the CSSP. Further, the assessment looked at how EDF NNB will maintain the integrity and currency of the CSA such that design changes, that will inevitably come from the construction programme, do not compromise the assessed security measures.

4.9 Comparison with Standards, Guidance and Relevant Good Practice

33 It will be incumbent upon EdF NNB, working with its Architect Engineer, to have a robust and effective process that ensures that any design changes considered necessary, before and during construction do not compromise the security arrangements articulated within the CSA.

34 This process will need to be acceptable, appropriate and comply with the arrangements developed under licence conditions LC16, LC19 and LC20.

4.10 Assessment – Security Aspects of Licence Condition 11

35 Licence Condition 11 covers the emergency arrangements that the licensee shall make and implement for dealing with an accident or emergency arising on the site and their effects.

36 Malicious incidents from a security perspective; theft, sabotage, incursion and other events; can cause effects that must be managed by the site response arrangements. The prospective licensee has therefore been encouraged to ensure that Contingency Plans for potential malicious incidents are considered, developed and tested appropriately and integrated with their emergency arrangements.

4.11 Comparison with Standards, Guidance and Relevant Good Practice

37 EdF NNB has adapted the Counter Terrorist Contingency Plan and other Security Response documents from EdF Nuclear Generation to its specific situation.

38 The Hinkley Point C emergency arrangements for dealing with public protest have been tested with real protestor activity that required the co-ordination of effort across the three

Hinkley Point sites and with the local Home Office Police Force, county and local council planning authorities and other emergency services. In preparation for further planned protestor activity NNB, along with the other two sites, have been fully involved in the Avon and Somerset Police led planning process.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

39 This report presents the findings of the ONR assessment of security in relation to the proposed licensing of EdF NNB for Hinkley Point C.

40 To conclude, I am broadly satisfied with the progress that EdF NNB have made in addressing security issues as they relate to nuclear site licensing considerations.

41 There is nothing from this security assessment that should prevent EdF NNB from receiving a Nuclear site licence.

5.2 Recommendations

42 My recommendations are as follows.

- **Recommendation 1:** EdF NNB can be issued a nuclear site license, from a security perspective.
- **Recommendation 2:** EdF NNB and its Architect Engineer must demonstrate that they have a clear and robust process to ensure that the Conceptual Security Arrangements for the UKEPR will be kept up to date through design changes during construction.
- **Recommendation 3:** EdF NNB must demonstrate that it has a clear and robust process to ensure that approved site security arrangements are not compromised during construction activities on the site.
- **Recommendation 4:** EdF NNB must demonstrate that it has an effective and robust process to ensure that the planned security site layout is not compromised during site development.

6 REFERENCES

- 1 *Nuclear Industries Malicious Capabilities Planning Assumptions*. OCNS. 27 June 2008. File Ref. SB5/2/4/3.
- 2 *Technical Requirements Document, Part Seven*. Office for Civil Nuclear Security, February 2010. TRIM Ref. 2010/61240.
- 3 *Classification Policy – Information concerning the Use, Storage and Transport of Nuclear and Other Radioactive Material*. Office for Civil Nuclear Security. GWP/G8, February 2012. Trim Ref. 2012/98261.
- 4a *Security Policy Framework*. Office for Nuclear Regulation, Civil Nuclear Security, Issue 5, July 2012. TRIM Ref. 2012/307505.
- 4b *Security Policy Framework, Civil Nuclear Security Standard No 2, Protective Marking and Asset Control*. Office for Nuclear Regulation, Civil Nuclear Security, Issue 3, March 2012. TRIM Ref. 2012/116519.
- 5 *Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities*. International Atomic Energy Agency. INFCIRC/225/Revision 5. January 2011. www.iaea.org.

Table 1

Relevant Security Related Documents Considered During the Assessment

Security Related Documents	Document Title	Description
TRD	Technical Requirements Document: Minimum Standards for the Physical Protection of Civil Licensed Nuclear Sites, Other Nuclear Premises and Nuclear Material in Transit	This document was issued by OCNS to support implementation of the NISR2003. Part Seven of this document details the security objectives, requirements and model standards for a New Nuclear Power Station.
NISR 2003	Nuclear Industries Security Regulations 2003	These regulations were made under the Anti-terrorism, Crime and Security Act 2001, to reform the civil nuclear security regulatory framework. The regulations provide a clear, unified approvals regime for nuclear security and for assessing compliance with approved security plans. The enforcement provisions of the regulations which apply broadly correspond to those of the Health and Safety at Work Act 1974.
CWP/G8	Classification Policy: Information Concerning the Use, Storage and Transport of Nuclear and Other Radioactive Material	The purpose of this policy is to indicate those categories of Protectively Marked Information (PMI) that require protection and the level of protective marking to be applied. CWP/G8 deals with the protective marking of information, including that held on IT systems, relating to nuclear facilities, Vital Areas, Nuclear Material (NM) and Other Radioactive Material (ORM) (including radioactive sources) and material designated as waste. In the interests of national security, a particular objective of this policy is to prevent the disclosure of information which could assist those planning a terrorist act, theft, sabotage or other malicious acts. Its application is therefore an integral element in the security of nuclear facilities (existing and proposed), NM and ORM.

Table 1

Relevant Security Related Documents Considered During the Assessment

Security Related Documents	Document Title	Description
SPF	Security Policy Framework: For the Protection of Sensitive Nuclear Information and Personnel Security in the Civil Nuclear Industry	<p>Protective Security, including physical, personnel and information security, is an essential enabler to making the nuclear industry and associated organisations work more effectively. Security risks must be managed effectively, collectively and proportionately, to achieve a secure and confident working environment.</p> <p>The Security Policy Framework has four Core Security Principles that are:</p> <ul style="list-style-type: none"> a. The Heads of Companies and Organisations provide senior level accountability for security within the civil nuclear industry. The civil nuclear industry must manage its security risks for the protection of SNI within the parameters set out in this framework. b. All employees (including contractors) in the civil nuclear industry have a collective responsibility to ensure the protection of SNI (which includes uranium enrichment technology, equipment and software) from terrorist attack and other illegal or malicious activity. c. Companies and Organisations in the civil nuclear industry must be able to share SNI knowing that it is reliable, accessible and protected to agreed standards irrespective of format or transmission mechanism. d. The civil nuclear industry must employ staff (and contractors) in whom they can have confidence and whose identities are assured.

Table 1

Relevant Security Related Documents Considered During the Assessment

Security Related Documents	Document Title	Description
NIMCA	Nuclear Industries Malicious Capabilities Planning Assumptions	The United Kingdom threat document for civil nuclear sites and facilities that address INFCIRC/225/Rev.5 Fundamental Principle G: Threat
INFCIRC/225	Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities	This document is Number 13 in the International Atomic Energy Agency (IAEA) Nuclear Security Series. This document is intended to assist Member States to put into practice a comprehensive physical protection regime, against malicious acts, for nuclear facilities and NM. It contains a set of recommended requirements to achieve the four physical protection objectives ³ and to apply the twelve fundamental principles ⁴ that were endorsed by the IAEA Board of Governors and General Conference.

³ To protect against unauthorised removal; to locate and recover missing nuclear material; to protect against sabotage; and to mitigate or minimize effects of sabotage.

⁴ Fundamental Principle A: Responsibility of the State. Fundamental Principle B: Responsibilities during International Transport. Fundamental Principle C: Legislative and Regulatory Framework. Fundamental Principle D: Competent Authority. Fundamental Principle E: Responsibility of the Licence Holders. Fundamental Principle F: Security Culture. Fundamental Principle G: Threat. Fundamental Principle H: Graded Approach. Fundamental Principle I: Defence in Depth. Fundamental Principle J: Quality Assurance. Fundamental Principle K: Contingency Plans. Fundamental Principle L: Confidentiality.

Annex 1

NOT APPLICABLE