

# NNB GENERATION COMPANY (HPC) LTD

## CONTRACT BASELINE DOCUMENT

### NUCLEAR SAFETY CULTURE REQUIREMENTS

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<b>Owner &amp; Approver</b>	Richard Savage
<b>Technical Reviewer</b>	Gavin Campbell
<b>Author</b>	Thomas Hughes

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## APPROVAL: NUCLEAR SAFETY CULTURE REQUIREMENTS

<b>Prepared by:</b>	<b>Name:</b> Thomas Hughes <b>Title:</b> Nuclear Safety Culture Lead	Date: Refer to EDRMS
<b>Verified by:</b>	<b>Name:</b> Gavin Campbell <b>Title:</b> Head of Health, Safety & Learning	Date: Refer to EDRMS
<b>Approved by:</b>	<b>Name:</b> Richard Savage <b>Title:</b> Safety & Regulation Director	Date: Refer to EDRMS

## DOCUMENT CONTROL

Revision	Purpose	Amendment	By	Date
01	P1 - For Implementation	Matrix changed following field experience and update to new document reference (replaces NNB-OSL-PRO-000172)	Bob Duarte	Refer to EDRMS
02	P1 - For Implementation	References updated and re-Published	Bob Duarte	Refer to EDRMS
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04	P1 - For Implementation	Revision of requirements in accordance with current project phase.	Thomas Hughes	11/03/2022

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>4</b>
1.1	Purpose.....	4
1.2	Scope .....	4
1.3	References and Definitions.....	5
<b>2</b>	<b>NUCLEAR SAFETY CULTURE REQUIREMENTS.....</b>	<b>6</b>
2.1	Training Requirements.....	6
2.2	Leadership / Personnel Requirements .....	7
2.3	Documentation / Assurance Requirements.....	7
2.4	Other Requirements.....	8
<b>APPENDIX A</b>	<b>OUR QUALITY COMMITMENTS .....</b>	<b>9</b>

A - APPROVED

## 1 INTRODUCTION

### 1.1 Purpose

This document supplements the conditions of contract, providing further details on the Contractor's obligations with regard to developing a Nuclear Safety Culture that demonstrates compliance with the Employer's 'Nuclear Safety Policy' [1]. The policy states that "Nuclear safety is our overriding priority. Every one of us has a direct or indirect impact on nuclear safety and it must be in the forefront of what we do."

Nuclear Safety Culture can be described as: 'An organisation's values and behaviours – modelled by its leaders and internalised by its members – that serve to make nuclear safety the overriding priority.' Implied in this definition is the notion that nuclear power plants are designed, built, and operated in a safe, reliable, efficient manner; that the concept of nuclear safety culture applies to every individual in the organisation, from the board of directors to the individual contributor. Compliance with these requirements enables this.

These requirements are intended to be considered in conjunction with the project's 'Quality Commitments' [Appendix A], delivering future nuclear safety for the operational plant through a focus on the prevention, detection and mitigation of latent conditions or errors.

### 1.2 Scope

Commensurate with the requirements of the Employer's 'Nuclear Safety Policy' [1], this document is required to be applied in a proportionate manner to all contracts which have been determined to have an impact on future operational nuclear safety – in practice, this means all contracts that involve the provision or installation of Nuclear Safety Classified equipment (NS Class 1, 2 or 3). The goal is to produce a plant that satisfies all the requirements for initial operation and is capable of operating safely and reliably over its lifetime. In large part, the success of the project is also measured by the completion of construction on schedule and within budget; however, these objectives must be accomplished secondarily to achieving high levels of safety and quality.

Additional guidance on Nuclear Safety Culture and industry best practices may be found in the references given in section [1.3].

## 1.3 References and Definitions

### NNB Document References:

No	Teamcenter Reference	Legacy Reference	Title
1	CBL100100615	NNB-308-POL-000008	Hinkley Point C Nuclear Safety Policy
2	CBL100100494	NNB-104-PRO-000011	Enable Continuous Improvement
3	CBL100100491	UKX-NNBPCP-XX-000-COD-001039	Common Framework Agreement
4	CBL100100525	UKX-NNBPCP-XX-000-COD-100002	General Quality Assurance Specification

### Best Practice References:

Reference	Location	Title
WANO PL-2013-1	<a href="https://tinyurl.com/4dp2krzw">https://tinyurl.com/4dp2krzw</a>	WANO Principles: Traits of a Healthy Nuclear Safety Culture
05-05-2020	<a href="https://tinyurl.com/3tzfwttn">https://tinyurl.com/3tzfwttn</a>	IAEA Working Document: A Harmonized Safety Culture Model
Stage 2 March 2013	<a href="https://tinyurl.com/bdzffvk">https://tinyurl.com/bdzffvk</a>	NIA Essential Guide for the Nuclear New Build Supply Chain
September 2018	<a href="https://tinyurl.com/hpn3h5fc">https://tinyurl.com/hpn3h5fc</a>	SDF Supply Chain Quality Requirements

### Terms & Abbreviations

Term / Abbreviation	Definition
GQAS	General Quality Assurance Specification
IAEA	International Atomic Energy Agency
NIA	Nuclear Industry Association
Nuclear Safety Culture	An organisation's values and behaviours – modelled by its leaders and internalised by its members – that serve to make nuclear safety the overriding priority
NS-Classified	Nuclear Safety Classified (components or systems)
SDF	Safety Directors Forum
SPOC	Single Point of Contact
WANO	World Association of Nuclear Operators
GQAS	General Quality Assurance Specification

## 2 NUCLEAR SAFETY CULTURE REQUIREMENTS

### 2.1 Training Requirements

2.1.1 The Employer provides a basic level of Nuclear Safety awareness training as part of the project introduction (delivered to all personnel requiring access to HPC site or offices). In addition, the Contractor shall ensure that nuclear safety significant roles within its organisation are identified, and that appropriate Nuclear Safety Culture training is provided to individuals performing these roles (note the Employer does not prescribe which roles are applicable, but (for example) these would be expected to include those conducting 'hands-on' work with NS-classified equipment/components, project managers, personnel performing surveillance or quality-related roles and leaders / managers with influence over nuclear safety-related decision-making). As a minimum, this training shall contain:

- i. Explanation of what is meant by nuclear safety culture, including the expectations on individuals and leaders to support this.
- ii. A definition of nuclear safety, including brief discussion of the special / unique characteristics of nuclear power.
- iii. Recognition that individual behaviours and actions can have significant nuclear safety impacts – including encouragement to stop and ask for assistance if unsure.
- iv. Explanation that nuclear safety consists of a 'defence in depth' model and that (during the construction phase), it is primarily about preventing, detecting and mitigating latent errors (i.e. those errors not immediately apparent that may impact the future nuclear safety of the plant).
- v. Confirmation that safety and quality are inter-linked, supporting the project's drive for 'right first time' and commitment to quality (built as designed and documented as built). The importance of conducting work in accordance with the Employer's designs, specifications and instructions should be reinforced.
- vi. Practical recommendations on how individuals can help to prevent errors and nuclear safety issues - for example, the use of error reduction techniques refer to Reference [3], adoption of a 'questioning attitude' and adherence to the project's 'quality commitments' [Appendix A].
- vii. Training records (e.g. names and dates) shall be maintained by the Contractor.

2.1.2 Upon request and/or as required for constrained activities (e.g. hold points), the Employer may request to review the Contractor's training materials and records for adequacy (in accordance with the specification given in [2.1.1]).

2.1.3 Where the Contractor does not have the in-house capability to develop/deliver such training as described in [2.1.1], the Employer will provide (on request) example materials and additional guidance as required. Subject to assessment on a case-by-case basis, the

Employer may opt to provide foundation-level nuclear safety culture training directly to the Contractor (or recommend suitable training that may be procured externally).

## 2.2 Leadership / Personnel Requirements

- 2.2.1 The Contractor shall identify an 'Executive Sponsor' as a leadership representative for nuclear safety in their organisation. The sponsor will provide direct access to the board or senior leadership team, will communicate matters affecting nuclear safety culture and agree strategies for continuous improvement where required. They will provide support and advocacy for the nominated single point of contact (SPOC) discussed below.
- 2.2.2 The Contractor shall identify a nominated single point of contact for nuclear safety culture development within their organisation. This individual will co-ordinate training needs, documentation requirements and agree continuous improvement plans for the organisation, ensuring adherence to the requirements set out in this document. On request, the Employer will provide advice, support and/or training to this individual to assist them in fulfilling this role. In smaller/flatter organisations, this individual may also take the role of Executive Sponsor as discussed above.
- 2.2.3 All individuals performing a nuclear safety significant role within the Contractor's organisation are expected to exhibit the basic knowledge, attributes and behaviours that support nuclear safety, in accordance with the training requirements stipulated in [2.1.1]. Additionally, further nuclear safety related expectations regarding error perception and reduction for individuals performing physical works on the HPC site are defined in the Common Framework Agreement in Reference [3].
- 2.2.4 This document has been prepared by the Employer's 'Nuclear Safety Culture Lead', representing the Employer's 'Safety & Assurance Directorate'. The Employer's 'Delivery Managers' will be responsible for ensuring that the requirements specified in this document are met by the Contractor.

## 2.3 Documentation / Assurance Requirements

- 2.3.1 The Contractor is required to define a 'nuclear safety policy' or similar high-level procedural documentation that articulates a commitment to developing and maintaining a Nuclear Safety Culture proportionate to their (organisational) level of influence over the provision or installation of Nuclear Safety Classified equipment. The Employer's nuclear safety policy [1] may be used as a template for this.
- 2.3.2 The Employer requires that the Contractor conducts at least one basic self-assessment of their own Nuclear Safety Culture (within 6 months of instruction with these requirements), thereby identifying and demonstrating that the appropriate processes, attitudes and behaviours that support nuclear safety have been adopted. Where necessary, a continuous improvement plan shall be enacted in response and progress against this measured through periodic update of the self-assessment (and / or use of alternative mechanisms for monitoring Nuclear Safety Culture e.g. surveys). Further supporting references are provided in [1.3] to aid the Contractor's understanding of

nuclear safety culture development and measurement. The Employer's expectations on the content of this self-assessment are as follows:

- i. Confirmation that nuclear safety significant roles within The Contractor's organisation have been identified, and that suitable training (in accordance with the specification given in section [2.1.1]) has been provided to (or scheduled for) these individuals.
- ii. Confirmation that an Executive Sponsor and SPOC have been appointed (as described in section [2.2]).
- iii. Confirmation that a nuclear safety policy or similar procedural documentation is in place (as per section [2.3.1]).
- iv. Confirmation (e.g. by way of interviews or surveys) that the organisation has adopted and promotes a safety-conscious work environment; in which individuals feel comfortable to stop work if unsure how to proceed, own up to their mistakes and question unusual or unacceptable conditions.

2.3.3 Upon request and/or as required for constrained activities (e.g. hold points), the Employer may request to review the Contractor's Nuclear Safety documentation and self-assessment (with associated improvement plans) for adequacy (as described in [2.3.1] and [2.3.2]).

2.3.4 One fundamental trait of a healthy nuclear safety culture is recognised to be an open reporting culture. The Contractor is expected to deliver this through compliance with the Employer's arrangements for Licence Condition 7 (Incidents on the Site) of the Nuclear Site Licence (NSL) through implementation of the Employer's procedure 'Enable Continuous Improvement' [2]. The Contractor is advised to refer to this document for specific requirements and expectations regarding use of organisational learning.

## 2.4 Other Requirements

2.4.1 Specific quality-related Nuclear Safety Culture requirements are given in the General Quality Assurance Specification (GQAS) [4]. Additionally, it is advised that the Contractor encourage and promote compliance with the Employer's 'Quality Commitments' [Appendix 1].

2.4.2 Should the Contractor appoint further sub-contractors to conduct works on Nuclear Safety Classified components / installations on their behalf, the requirements contained in this document shall be communicated to the sub-contractor and their application assured by the Contractor.

2.4.3 The Employer advises that frequent and consistent reminders of Nuclear Safety Culture principles and best practices are provided through the Contractor's internal communications channels. This programme of reinforcement is important in ensuring the retention of training content covered in section [2.1.1]. Examples of such communications are news articles, web content, emailed reminders, safety messages, presentations, tool-box talks etc. The Employer can provide examples of relevant communications on request.



## APPENDIX A OUR QUALITY COMMITMENTS



Compliance with  
**Our Quality Commitments**  
 Delivers future Nuclear Safety



Find out more on [teamhinkley.com](https://www.teamhinkley.com)