

## Nuclear Professionalism Standard

The Nuclear Professionalism Standard sets out the core knowledge and understanding, behaviours and commitment expected from all those who work in nuclear organised into three areas of competence:

- A. Knowledge and understanding of the nuclear industry.
- B. Safety and security.
- C. Professional responsibility, commitment, and ethics.

### A. Demonstrate knowledge and understanding of the nuclear industry and describe your contribution to nuclear.

**As a nuclear professional, you will**

#### **A1. Demonstrate understanding of the nuclear industry and the part it plays in society.**

This includes demonstrating that you

- a) understand the nuclear industry, its scope and its place within the energy, defence and health landscape.
- b) understand key technologies and main scientific concepts employed in the nuclear industry.
- c) understand the broad regulatory framework within which the nuclear industry operates.
- d) can accurately present the advantages and potential risks of nuclear technology (including how such risks are mitigated).

#### **A2. Demonstrate understanding of your sector<sup>1</sup> of the nuclear industry.**

This includes demonstrating that you

- a) understand the sector of the nuclear industry in which you work, its purpose, outputs, contribution and its relationship with the broader nuclear industry (including internationally as appropriate).
- b) understand the legal and regulatory frameworks relevant to the work undertaken by your organisation and to your particular area of operation, and the potential consequences of non-compliance.
- c) have an understanding of the main concepts, technologies and terms used within your area of operation.
- d) can describe - and explain how you comply with - local and organisational policy, procedures, work processes and management systems in your area of work.

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<sup>1</sup> By sector, we mean the area of the nuclear industry in which you work – for example, new build, defence, waste management, decommissioning.

### A3. Demonstrate understanding of the purpose of your role and your contribution to nuclear.

This includes demonstrating that you

- a) can describe your particular role, its responsibilities and accountability.
- b) understand the purpose of your work and its impact – including how you perform your role impacts on, and contributes to, the work of others e.g. your team, your wider organisation and the broader sector.
- c) can explain how you bring your own specific knowledge, skillset and/or areas of expertise to bear in your role and how this adds value – and the considerations specifically applicable to nuclear in the exercise of your specialist skillset<sup>2</sup>.

## B. Ensure the safety and security of activities in the nuclear industry.

As a nuclear professional, you will

### B1. Demonstrate an understanding of the nature of risk in the nuclear industry, and the regulatory and other frameworks relating to safety and security.

This includes demonstrating that you

- a) are aware of the **safety** and **security** track record of the nuclear industry, key incidents, identified causes, contributing factors and lessons learned.
- b) are aware of the regulatory requirements for control of radioactive materials.
- c) understand how organisational and human factors have contributed to nuclear industry accidents and can describe the way in which error reduction tools are effectively employed in the industry to manage risk.
- d) understand potential **security** threats and the reasons why controls are required.
- e) are aware of and understand the implications of legislation, regulations, licensing and authorising requirements, safeguards, systems, and standards relating to the protection of people, property and the environment from hazards and threats.
- f) understand how physical, personnel, cyber security/safety measures are used to protect workers and the wider public from nuclear risks and threats.

### B2. Demonstrate an understanding of – and personal commitment to – nuclear safety and security and actively apply it in your work.

This includes demonstrating that you

- a) understand what is **safety**- and **security**-critical in your work.
- b) can describe the wider **safety** and **security** roles, functions, and responsibilities within your organisation and in the locations in which you work.

<sup>2</sup> This could include any professional skillset you have – for example, procurement, legal, financial, engineering, science, research, medical, process safety, environmental, business development, project management etc.

- c) exhibit the behaviours required to ensure a strong **safety** culture and **security** culture, contribute to continuous improvement and minimise risk, for example
- ensuring clear, timely and accurate communication.
  - maintaining a questioning attitude and reporting issues and concerns.
  - being prepared to challenge others as well as accept challenge.
  - being vigilant and alert to anomalies, off-normal, undesired, or uncertain conditions.
  - adhering to human performance and error reduction practices and procedures.
  - using appropriate **safety** equipment and PPE for each task, in accordance with training.
  - planning and controlling work activity to minimise risk.
  - practising visible leadership as appropriate to your role, including
    - supporting and coaching others,
    - reinforcing standards and commitment to policy and procedures
    - providing appropriate oversight during **safety- or security-significant** work
- d) understand principles, protocols and behaviours required to maintain **security** for example in
- cybersecurity and threats from malicious acts.
  - data security, including storage and handling of documents and materials, electronic communication technology and transmission of sensitive information.
  - the use of AI and social media.
  - physical access and site **security**.

### B3. Demonstrate an understanding of potential emergency situations and how to respond to incidents, emergencies, and alarms.

This includes demonstrating that you

- a) maintain your knowledge and understanding of emergency procedures including through attending regular training and demonstration exercises.
- b) understand your assigned emergency preparedness responsibilities and are well prepared to perform their emergency response organisation duties.
- c) understand the risks of exposure to radiation, the nature of contamination and the importance of minimising the potential for exposure.
- d) take appropriate action when faced with unexpected or uncertain conditions to prevent or minimise the risk of a safety incident, unsafe action, or other unintended consequence of your work.

## C. Demonstrate professional responsibility, commitment and ethics.

As a nuclear professional, you will

### C1. Take ownership of your performance and your professional development in nuclear and support the development of others.

This includes demonstrating that you

- a) are accountable for your actions and decisions and take responsibility for the work you do.
- b) consider the impacts of your work, including exhibiting an awareness of what could happen if you do not perform your role effectively.
- c) communicate clearly about your work and factors which could affect others.
- d) understand the limits of your responsibilities - and consider knowledge, skill, familiarity, understanding, recent experience and whether you are fit to perform the task effectively before executing an activity.
- e) are receptive to constructive feedback and understand how to apply it to develop your performance.
- f) maintain and develop your knowledge, skills, and competence relevant to your own role and the nuclear industry, including
  - reflecting on your work and performance and learning from experience.
  - identifying learning needs and skills gaps.
  - planning and managing your personal and professional development, and
  - keeping a record of your activities and how they have benefited your practice.
- g) support the professional development of others, including through knowledge sharing and the dissemination of good practice and lessons learned.

### C2. Understand and exercise your professional responsibilities to people and the environment.

This includes demonstrating that you

- a) work in a way which is respectful of others and is open to different viewpoints and ideas.
- b) are willing to challenge actions and behaviours of others and respond positively and constructively to challenges by others.
- c) understand and can articulate what is meant by professional ethics and personal values and explain how you model them in your work and act to build trust in the profession.
- d) can identify potential ethical and moral issues, responsibilities and challenges which could arise within your work area and respond appropriately.
- e) understand how your work - including activities, methods of working, equipment - have a potential to impact on the environment.
- f) use resources efficiency and effectively, to minimise the environmental impact of your work and promote sustainability.