

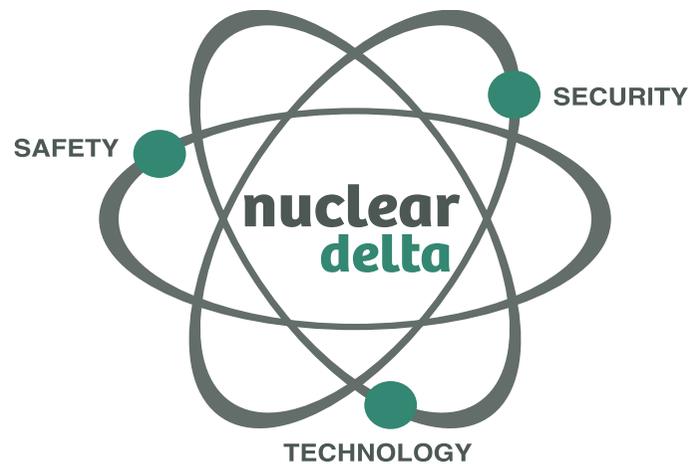
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Identifying appropriate evidence for assessment against the Nuclear Delta®

Guidance for applicants seeking election as a Member or Fellow of the Nuclear Institute

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A single standard for all Nuclear Professionals

The Nuclear Delta® sets standards of understanding and behaviours that enable nuclear professionals to operate safely and effectively within the sector and which they must demonstrate to qualify for professional membership or fellowship of the Nuclear Institute (MNUcl, FNUcl).

The Nuclear Delta® is designed to be applicable to nuclear professionals working in all areas of the nuclear industry and in the supply chain. Maintaining and continuously improving nuclear safety and security depends on all of us understanding the hazards and risks associated with our work, including those particular to nuclear and, crucially, ensuring our decisions and actions support safe nuclear operations, both now and in the future.

Nuclear professionals perform a wide range of functions, some highly technical and specialist, others in important support roles, including in the supply chain providing services or designing, manufacturing or constructing components and structures essential to nuclear safety and security.

Regardless of discipline, technical or non-technical, all nuclear professionals appreciate the risks and hazards in the industry and can demonstrate how, through their actions and behaviours while performing their role, they contribute to maintaining and improving safety and security.

Applying the Nuclear Delta® standard to your work role

To reflect the breadth of the industry and range of professional disciplines working within it, the Nuclear Delta® includes references to differing stages of the nuclear fuel cycle, e.g. reactor operations, decommissioning, waste management, etc. Similarly, the standard addresses a range of science and engineering principles and practices which provide core underpinning knowledge for many nuclear professionals performing technical scientific or engineering roles.

Applicants are **not** expected to have detailed knowledge across all of the topics specified. Within the standard you will encounter the following phrases:

*....demonstrate knowledge and understanding of the following topics at a level appropriate to your responsibilities and grade
and*

....at a level, breadth and depth applicable to your role and working environment, drawn from the following areas

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When thinking about how the standard applies to you, consider which of the topics are relevant to your workplace and role. For example, a person performing a technical role in an operational nuclear power plant could be expected to have a detailed understanding of reactor systems and reactor safety and hazards; they could reasonably be expected to have very little knowledge of nuclear weapons, reprocessing or waste management.

Applying the Nuclear Delta® standard to non-technical roles

A person working in a non-technical role, for example a Project Manager or a Commercial Manager in the manufacturing supply chain, will be expected to understand the hazards and risks being managed by the nuclear site licence companies they work with or supply. This can be based on an awareness, rather than a detailed understanding of the applicable scientific or engineering principles. Crucially, evidence presented against the *Nuclear Delta®* must demonstrate an understanding of how their work, including output or products, helps maintain safe and secure nuclear operations.

Evidence presented against the *Nuclear Delta®*, whether from technical or non-technical work activities, must demonstrate that while performing your role you routinely take into account the possible impact of your decisions and actions and that you take appropriate steps to ensure that safety and security is maintained.

Nuclear Professionals in non-technical roles routinely take decisions, perform activities and display behaviours that impact directly upon nuclear safety and security. The ways in which non-technical Nuclear Professionals contribute to nuclear safety and security are many and varied:

From ensuring appropriate safety specifications are included in a procurement documents, to maintaining component traceability in the supply chain, to using a management position and influence to reinforce safety messages, to complying with contractor access procedures to ensure site licence compliance, to securing information and digital records...

Focus on your workplace and role

When collating evidence against the *Nuclear Delta®* you should focus on the areas of the standard relevant to your workplace and role. NI Membership Assessors will consider your role and working context when determining if appropriate evidence has been presented.

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If you work in a specialised, technical role on a Nuclear Licensed Site, you will need to bring forward evidence that demonstrates your specialist technical knowledge and that you apply this to perform your role safely, securely and effectively in accordance with employer and regulatory requirements.

If you work in a non-technical role away from a licensed nuclear site, you will need to bring forward evidence that demonstrates you understand the risks and hazards being managed by your clients and that you apply this knowledge and understanding to the performance of your work.

Whether technical and working directly at a nuclear facility or non-technical and/or working off-site, every discipline has its own areas of specialist knowledge and expertise. Applying this knowledge and expertise while at the same time working to strengthen nuclear safety and security culture and practice is the common, defining characteristic of nuclear professionals across the sector.

The Nuclear Delta[®] Standard The standard for Professional Membership of the Nuclear Institute	Examples of evidence The examples given below are intended to help you identify activities within your own role that you could use to demonstrate the required knowledge, understanding and behaviours. These are only indicative and do not provide a comprehensive list of all the types of evidence you can use. You need to identify activities that you undertake or contribute to in your own role and working environment that demonstrate how you meet the Nuclear Delta [®] standard.
Nuclear Safety Culture	

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<p>To comply with the Nuclear Delta requirements, members shall demonstrate;</p> <ul style="list-style-type: none"> • A clear understanding of ‘Nuclear Safety Culture’. • A commitment to ‘personal behavioural standards’ within the Nuclear Industry 	<p>Evidence against this section needs to demonstrate understanding and consistent and recurring action to maintain and strengthen the nuclear safety culture within your organisation and area of influence.</p> <p>Assessors will expect to see evidence that you understand and comply with your organisations policies and procedures as well as actively contributing to maintaining an effective safety culture.</p>
<p>Knowledge and understanding:</p>	<p>Participation in formal induction and training; routine use of human performance and error reduction tools; work records/reporting safety issues; condition reports; awareness and use of codes and standards; contributions to monitoring, self-assessment or peer review activities; aware/participate in safety forums – tool box talks, safety committees, etc. Personal or Line Management statements; suggestions for changes and improvements (to products, processes, safety practices, etc.); notes of planning/pre-job briefs identifying potential consequences for safety and actions taken prevent or minimise risk.</p> <p>Knowledge of and compliance with own organisation’s regulation, nuclear safety policies and procedures, awareness and compliance with SLC/client nuclear safety policies and safety procedures – as applicable to your role/organisation.</p>
<p>Commitment to behaviours and standards</p>	<p>Examples of challenging unsafe acts/behaviours; personal reflective statements; line manager testimony; site reporting records; safety improvement projects or activities; minutes; safety talks; participation in investigations and analysis of abnormal conditions.</p>
<p>Additional requirements for people in leadership positions</p>	<p>Communications reinforcing safety standards and policies; reports and analysis of safety or security issues; presentations and training delivery;</p>

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	training records; record of addressing unsafe practices; remedial or improvement actions
Nuclear Security Culture	
<p>To comply with the Nuclear Delta requirements, members shall demonstrate;</p> <ul style="list-style-type: none"> • A clear understanding of 'Nuclear Security Culture'. • A commitment to 'personal behavioural standards' within the Nuclear Industry. <p>The standard below is aligned to the IAEA Nuclear Security definition of Nuclear Security Culture, defined as: <i>The assembly of characteristics, attitudes and behaviour of individuals, organisations and institutions which serve as a means to support and enhance nuclear security.</i> (IAEA Nuclear Security Series No 7 & ONR TAG CNS-TAST-GD-002 (Rev 0))9</p>	<p>Evidence against this section needs to demonstrate understanding and consistent and recurring action to maintain and strengthen the nuclear security culture within your organisation and area of influence.</p> <p>Assessors will expect evidence that you understand and comply with your organisations policies and procedures as well as actively contributing to maintaining an effective security culture.</p> <p>Assessors understand the confidential nature of records pertaining to security; the majority of evidence will therefore be in the form of personal reflective statements. Assessors can establish that an applicant has a sound understanding of Nuclear security and are able to discharge their role responsibilities without needing access to site specific confidential information.</p> <p><i>Please Note:</i> Care should be taken not to inadvertently include confidential information within your body of evidence.</p>
Knowledge and understanding:	<p>Participation in formal induction and training; participation in safety and security exercises; reporting records highlighting security concerns or issues; personal reflective statements – compliance with own organisation's security policies and procedures, awareness and compliance with SLC/client security procedures, understanding of Safeguards – as applicable to your role/organisation. Personal statements regarding information and data security. Work records/personal statements showing understanding and compliance with applicable regulatory requirements. notes of planning/pre-</p>

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	job briefs identifying potential consequences for security and actions taken to prevent or minimise risk.
Commitment to behaviours and standards	Examples of challenging acts that could undermine security; personal reflective statements; line manager testimony; site reporting records; contribution to security monitoring or review activities; identifying and recording security breaches or shortfalls; communications promoting and reinforcing security practices.
<i>Nuclear Technology & Safety</i>	
<p>To comply with the Nuclear Delta requirements, members shall demonstrate;</p> <ul style="list-style-type: none"> • A clear understanding of ‘Nuclear Technology & Safety.’ • A commitment to ‘personal behavioural standards’ within the Nuclear Industry. <p>The standard below is aligned to the IAEA definition of Nuclear Safety, defined as: <i>The achievement of proper operating conditions, prevention of accidents or mitigation of accident consequences, resulting in protection of workers, the public and the environment from undue radiation hazards.</i> (IAEA Safety Glossary).</p>	<p>Evidence against this section needs to focus on the understanding, use and interaction with technology and safety mechanisms designed to maintain proper operating conditions, prevent or mitigate the consequences of accidents and protect workers, the public and the environment.</p> <p>People in technical science and engineering roles should focus on the technologies, principles and specialist knowledge applicable to their role and workplace.</p> <p>People in non-technical roles who do not work directly with applicable technologies will be expected to understand the broad principles of defence in depth, and know about any control measures with which they need to interact, e.g. restricted areas, contamination monitoring, health screening/health physics monitoring; emergency procedures, alarms and responses, etc.</p>

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	<p>Some non-technical roles, including in the supply chain, may require a detailed knowledge of one or more of the topics in the Nuclear Delta while not extending to having a broad underpinning knowledge.</p> <p>You should consider all the topics listed and bring forward evidence for any which are applicable to your role or workplace.</p>
<p>Knowledge and understanding:</p>	<p>Participation in formal induction and training; training to develop understanding of nuclear science and technologies at a level appropriate to your role and responsibilities; work records, reports evaluating technologies; 'optioneering' projects; improvement or change projects; records demonstrating you take into account nuclear safety considerations when working on the design/ manufacture/ installation/ maintenance/ decommissioning, transport or disposal of products or plant; understanding and operating within normal operating conditions;</p> <p>Personal reflective statements outlining own role and activities in implementing and/or complying with own organisation's regulation, safety policies and procedures; awareness and compliance with SLC/client safety arrangements and procedures; understanding and interaction with control measures to prevent contamination; understanding and interaction with measures to reduce and control exposure to radiation; the regulatory regime within which you work and the actions you need to take to maintain ongoing compliance.</p>
<p>Commitment to behaviours and standards</p>	<p>Examples of maintaining safety standards within your area of responsibility such as challenging unsafe acts/behaviours, reporting and resolving conditions or practices that could undermine safety standards; examples of</p>

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	<p>actions taken in the event of unexpected or uncertain conditions; Personal reflective statements outlining how you apply operating procedures and safe systems of work ; line manager testimony; site reporting records; safety improvement projects or activities; minutes; safety talks; participation in investigations and analysis of abnormal conditions.</p> <p>Evidence of participation in emergency scheme training and/or exercises</p>
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