



ONR GUIDE			
ORGANISATION OF AND SUPPORT TO THE TRAINING FUNCTION			
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OFFICIAL**1. INTRODUCTION**

- 1.1 The Office for Nuclear Regulation (ONR) has established a set of Security Assessment Principles (SyAPs) (Reference 7). This document contains Fundamental Security Principles (FSyPs) that dutyholders must demonstrate have been fully taken into account in developing their security arrangements to meet relevant legal obligations. The security regime for meeting these principles is described in security plans prepared by the dutyholders, which are approved by ONR under the Nuclear Industries Security Regulations (NISR) 2003 (Reference 1).
- 1.2 The term 'security plan' is used to cover all dutyholder submissions such as nuclear site security plans, temporary security plans and transport security statements. NISR Regulation 22 dutyholders may also use the SyAPs as the basis for Cyber Security and Information Assurance (CS&IA) documentation that helps them demonstrate ongoing legal compliance for the protection of Sensitive Nuclear Information (SNI). The SyAPs are supported by a suite of guides to assist ONR inspectors in their assessment and inspection work, and in making regulatory judgements and decisions. This Technical Assessment Guidance (TAG) is such a guide.

2. PURPOSE AND SCOPE

- 2.1 This TAG contains guidance to advise and inform ONR inspectors in exercising their regulatory judgment during assessment activities relating to a dutyholder's organisation of and support to the training function. It aims to provide general advice and guidance to ONR inspectors on how this aspect of security should be assessed. It does not set out how ONR regulates the dutyholder's arrangements. It does not prescribe the detail, targets or methodologies for dutyholders to follow in demonstrating they have addressed the SyAPs. It is the dutyholder's responsibility to determine and describe this detail and for ONR to assess whether the arrangements are adequate.

3. RELATIONSHIP TO RELEVANT LEGISLATION

- 3.1 The term 'dutyholder' mentioned throughout this guide is used to define 'responsible persons' on civil nuclear licensed sites and other nuclear premises subject to security regulation, a 'developer' carrying out work on a nuclear construction site and approved carriers, as defined in NISR. It is also used to refer to those holding SNI.
- 3.2 NISR defines a 'nuclear premises' and requires 'the responsible person' as defined to have an approved security plan in accordance with Regulation 4. It further defines approved carriers and requires them to have an approved Transport Security Statement in accordance with Regulation 16. Persons to whom Regulation 22 applies are required to protect SNI. ONR considers competence management to be an important component of a dutyholder's arrangements in demonstrating compliance with relevant legislation.

4. RELATIONSHIP TO IAEA DOCUMENTATION AND GUIDANCE

- 4.1 The essential elements of a national nuclear security regime are set out in the Convention on the Physical Protection of Nuclear Material (CPPNM) (Reference 4) and the IAEA Nuclear Security Fundamentals (Reference 3). Further guidance is available within IAEA Technical Guidance and Implementing Guides.

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- 4.2 The importance of issues relating to workforce competence are also recognised in the Nuclear Security Fundamentals, specifically:
- Essential Element 12: Sustaining a Nuclear Security Regime – 3.12:
 - d) Allocating sufficient human, financial and technical resources to carry out the organisation’s nuclear security responsibilities on a continuing basis using a risk informed approach; and
 - e) Routinely conducting maintenance, training, and evaluation to ensure the effectiveness of the nuclear security systems.
- 4.3 A more detailed description of the elements is provided in Recommendations level guidance, specifically Nuclear Security Series (NSS) 13, Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5) (Reference 2). This publication highlights the importance of sustainability programmes to ensure that physical protection regimes are resilient and effective in the long term through adequate resourcing. With respect to competence management it advises that operators, shippers and carriers should establish sustainability programmes for their physical protection system, which should encompass human resource management and training.
- 4.4 The IAEA also publishes NSS 12 “Educational Programme in Nuclear Security” (Reference 9). It is intended for a range of people with responsibility for nuclear security including university curriculum developers, nuclear security instructors and human resource development managers. The scope of this publication is broad and covers education in all areas of nuclear security, ranging from MSc programmes for developing highly educated staff with in-depth knowledge, to a programme for the development of certified nuclear security specialists.
- 4.5 This TAG is also consistent with the Systematic Approach to Training, advocated by the IAEA in in Technical Document 1254 (Reference 8) and implicit in other publications (References 10 and 11).

5. RELATIONSHIP TO NATIONAL POLICY DOCUMENTS

- 5.1 The SyAPs provide ONR inspectors with a framework for making consistent regulatory judgements on the effectiveness of a dutyholder’s security arrangements. This TAG provides guidance to ONR inspectors when assessing a dutyholder’s submission demonstrating they have effective processes in place to achieve SyDP 3.4 – Organisation of and Support to the Training Function, in support of FSyP 3 – Competence Management. The TAG is consistent with other TAGs and associated guidance and policy documentation.
- 5.2 The HMG Security Policy Framework (SPF) (Reference 5) describes the Cabinet Secretary’s expectations of how HMG organisations and third parties handling HMG information and other assets will apply protective security to ensure HMG can function effectively, efficiently and securely. The security outcomes and requirements detailed in the SPF have been incorporated within the SyAPs. This ensures that dutyholders are presented with a coherent set of expectations for the protection of nuclear premises, SNI and the employment of appropriate personnel security controls both on and off nuclear premises.

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5.3 The Classification Policy (Reference 6) indicates those categories of SNI, which require protection and the level of security classification to be applied.

6. ADVICE TO INSPECTORS

6.1 It is essential that personnel whose activities have the potential to impact on nuclear security are Suitably Qualified and Experienced (SQEP) to carry out their jobs. This includes those who directly carry out security operations and others such as directors, managers, designers, security plan authors, etc, whose roles, if inadequately conceived or executed, may affect security in less obvious ways. For example, through introducing latent technical or organisational vulnerabilities. Dutyholders should, therefore, put in place robust arrangements for identifying their competence needs and ensuring these are met and maintained. The arrangements should clearly define the dutyholder's interpretation of SQEP, and should identify those who need to be SQEP. Staff discharging nuclear security roles should be included within the dutyholder's organisational baseline - see NS-TAST-GD-065 (Reference 12) and TAG 1.2.

6.2 Training is a fundamental mechanism through which personnel acquire, and maintain, the skills and knowledge needed to perform a job to defined standards. Training is instrumental in developing and sustaining competence. IAEA has defined competence as "the ability to put skills and knowledge into practice in order to perform a job in an effective and efficient manner to an established standard". ONR supports this definition, which is widely accepted within the international nuclear community. Other factors contributing to a person's competence include their prior experience, aptitude, attitude, behaviours, skills and qualifications. Competence can therefore broadly be equated to SQEP. Dutyholders should have arrangements in place to define and deliver the training needed to develop and sustain competence.

6.3 ONR does not assess the competence of dutyholder staff (e.g. security guards or control room operators) directly, or authorise them. Rather ONR seeks confidence that dutyholders have put in place, and are implementing, effective and proportionate arrangements for training and competence assurance for all personnel whose activities may impact upon security. This should cover both dutyholder employees and contracted elements of the workforce, whose actions could impact upon nuclear security. A well-designed training and competence management system should adequately address the following elements:

- Analysis of roles and associated competencies
- Identification of learning objectives and training needs
- Assessment of competence (gap analysis)
- Training programme design
- Selection of appropriate training staff, methods and media
- Evaluation of training effectiveness
- Organisation and support of the training function
- Knowledge management and capture
- A process to measure, assess and improve the competence management arrangements

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- 6.4 This guidance should be applied in a proportionate and targeted manner at each stage. It focuses on the analysis of roles and associated competencies, presenting a summary of the reasons why these are important components of a dutyholder's training arrangements, and sets out the principal assessment factors which should be considered by the inspector.
- 6.5 The emphasis that the inspector gives to assessing different elements of a dutyholder's training and competence arrangements will depend upon the plan being assessed. For example, where the tasks involved in carrying out a role are already well-defined, it may not be necessary to closely scrutinise the processes used to analyse the role and define its competence and training needs. Conversely, where new activities are being developed, closer examination of the approach which the dutyholder takes to analysing these factors may be appropriate. As an overriding principle, the inspector should consider the security significance (as effected by aspects including security function category or the categorisation for theft or sabotage) of the activities concerned and adopt a proportionate and targeted approach to applying the guidance in this document.

Regulatory Expectation

- 6.6 The regulatory expectation placed upon the dutyholder is that they will ensure that the security plan identifies how they organise and provide support to the training function as part of an ongoing commitment that personnel with security roles are SQEP to carry out their jobs.

FSyP 3 - Competence Management	Organisation of and Support to the Training Function	SyDP 3.4
Training and competence assurance of personnel with security roles should be given due priority by dutyholders.		

7. ORGANISATION AND SUPPORT OF THE TRAINING FUNCTION**Management of Training**

- 7.1 The training and competence assurance of personnel with security roles should be regarded as a priority by dutyholders. ONR expects the dutyholder to show that the competence delivery functions are supported by a commitment to it from senior levels in the organisation and by an appropriate management structure. The commitment to competence and training should be embodied in a policy which recognises the need to develop and maintain the competence of staff in order to achieve and maintain security. It should also affirm the dutyholder's commitment to resource and maintain a training system and strategy that support implementation of the policy, recognising the need to accommodate a diverse range of staff and contractors who may have differing development requirements.
- 7.2 Organisation of the training function may differ from dutyholder to dutyholder and it is not ONR's role to prescribe or define how this is done. However, responsibilities for training should be clearly defined, and the dutyholder should be able to demonstrate that training is being effectively resourced, specified, delivered, assessed, monitored and reviewed. This includes ensuring that training which is provided by third parties, either on or off-site, is suitably specified and delivered. There should be a clear

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reporting route for departments or role-holders charged with responsibility for training which ensures that training issues can be raised at Board level if necessary.

- 7.3 The immediate responsibility for ensuring that personnel are competent, and medically fit, to carry out tasks which impact on security, rests with their line management. This requires that line management is cognisant of the purpose and significance of training, that they appreciate the need to monitor staff performance, and ensure that where necessary staff are subject to regular medical examination.
- 7.4 Where a training department exists, the dutyholder should ensure that adequate interfaces exist between training and other departments to identify training needs and make personnel available for training. The training department should be actively involved in helping line management organise training programmes for their staff and monitoring that line management implements these programmes. The training department may also take an active role in delivering certain elements of training.
- 7.5 The provision of effective training requires that personnel with a training role are themselves suitably qualified and experienced to be effective. It is important, therefore, that resources are made available for trainers to maintain and develop their own capability. Where training has been arranged so that it is delivered by a non-specialist (e.g. by an experienced person in the context of on-job training), the dutyholder should ensure the trainer is suitably equipped to carry out this role. This should involve training them in instructional techniques, ensuring they are familiar with the basics of adult learning and the programme follows the Systematic Approach to Training (SAT) as advocated by the IAEA, or another internationally recognised training design methodology. The dutyholder should ensure the training policy, course learning objectives, training methods and assessment criteria are clearly understood by trainers and trainees.
- 7.6 A SAT should be used for the training of security personnel. The systematic approach provides a logical progression from identification of the competencies required for performing a job, to the development and implementation of training towards achieving these competences, and to the subsequent evaluation of training. The use of a SAT offers significant advantages over more conventional curriculum-driven training in terms of consistency, efficiency and management control, leading to greater reliability of training results and more effective security of the facility. A SAT should include the following phases:
- **Analysis.** This should comprise the identification of training needs and the competences required to perform a particular job.
 - **Design.** In this phase, competences should be converted into training objectives. These objectives should be organised into a training plan.
 - **Development.** In this phase training material should be prepared so that all training objectives can be achieved.
 - **Implementation.** In this phase training should be delivered using the training programme data collected in each of the preceding phases.
 - **Evaluation.** In this phase all aspects of the training programme should be evaluated on the basis of the data collected in each of the preceding phases. This should be followed by feedback that confirms the training still meets the needs of the organisation and leads to continual improvements in the syllabus or training materials.

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- 7.7 In recent years, dutyholders have placed increasing emphasis on the use of contract resource. Placing work with external contractors or agency staff does not negate or mitigate the dutyholder's responsibility for ensuring that all personnel whose actions have the potential to affect security are suitably qualified and experienced.
- 7.8 External contractors may have been trained and assessed to different standards from those of the dutyholder's directly employed workforce. The dutyholder should have adequate arrangements to ensure that contractors are competent to work securely and efficiently and that the standards required of the contractors are consistent with those it would require of its employees. These should cover both technical competencies and also the other competencies and knowledge which contribute towards secure operations of a facility and the site (e.g. site induction training, communication skills, administrative arrangements and procedures, behaviours, etc.). The dutyholder should, therefore, put contractors through its own training and competence assessment programme, or otherwise satisfy itself that the contractor's own arrangements for ensuring the technical and behavioural competence of its staff are adequate. The latter approach is important when the contractor is not simply replacing the dutyholder's own staff, but, instead, brings technical competencies which are outside the dutyholder's own areas of capability. Thus the dutyholder may need to carry out audits of the contractor's own training arrangements.

Training records

- 7.9 ONR regards the design, control and maintenance of accurate training and competence records as essential elements for dutyholders to support achievement of FSyP 3 – Competence Management. Such records enable training to be scheduled and delivered against a controlled statement of training needs. As such, they are a vital input to the planning process for training. They also provide evidence for both the dutyholder and ONR to ensure that training has been given and the competence of all personnel with security roles has been formally assessed.
- 7.10 The value of training records is related to the quality of information which is entered into them, and the use that is made of this information. The dutyholder should ensure that this information, and the design of the record system, enables training to be planned, scheduled, delivered and monitored effectively. Accordingly, training records should be subject to proper quality management processes.
- 7.11 Some dutyholders are moving towards the development and implementation of integrated human resources/competence management systems. Properly specified, they can offer considerable benefits by providing a comprehensive and consistent framework for managing a dutyholder's resource/competence needs, and the availability of personnel. They may be used to identify weakness of depth and assist in activities such as succession planning, and can help the dutyholder to maintain a current organisational Baseline. Ideally, the record system should also provide advance warning of the need for repeat/refresher training to ensure that staff competencies remain "in-date". The National Skills Academy Nuclear (NSAN) has developed such a competence management system that is free for dutyholders who are members of the NSAN network and have access to NS4P.

Inspectors should consider:

- Does the dutyholder have a training policy which sets out the company's commitment to training?

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- Does the dutyholder allocate a specific number of days for employees to undertake training activities? Does the dutyholder have a management system for training personnel whose actions may impact upon security?
- Are responsibilities for training clearly defined, and do those who are responsible for discharging these responsibilities demonstrate an awareness and understanding of modern training standards?
- Does the dutyholder follow the five step SAT process?
- Are changes to the training and competence management system properly controlled and authorised?
- Do line management recognise their responsibility for assuring the competence of personnel and appreciate the need to make personnel available for training?
- Does the management system define the interfaces between those responsible for training and those with line management responsibility for staff whose activities may impact on security?
- Is the training function adequately resourced, in terms of staff numbers and capabilities?
- Are personnel who conduct training provided with instructional skills and guidance so that they can perform their roles effectively?
- If contractors are not subject to the dutyholder's own training and assessment practices, do the dutyholders ensure that the contractor's own arrangements for maintaining and demonstrating the competence of its staff are adequate?
- Are training records available and up to date, and are they controlled in an appropriate manner?
- Are the training records reviewed periodically so as to identify training or competence shortfalls or omissions?

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1. **Nuclear Industries Security Regulations 2003.** Statutory Instrument 2003 No. 403
2. **IAEA Nuclear Security Series No. 13.** Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (**INFCIRC/225/Revision 5**). January 2011. www-pub.iaea.org/MTCD/Publications/PDF/Pub1481_web.pdf.
3. **IAEA Nuclear Security Series No. 20.** Objective and Essential Elements of a State's Nuclear Security Regime. http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1590_web.pdf
4. **Convention on the Physical Protection of Nuclear Material (CPPNM)** <https://ola.iaea.org/ola/treaties/documents/FullText.pdf>
5. **HMG Security Policy Framework.** Cabinet Office. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/316182/Security_Policy_Framework_-_web_-_April_2014.pdf
6. **NISR 2003 Classification Policy** – Trim Ref. 2012/243357.
7. **Security Assessment Principles** – Trim Ref. 2017/121036
8. **IAEA –TECDOC-1254.** Training the Staff of the Regulatory body for Nuclear Facilities. November 2001.
9. **IAEA Nuclear Security Series No. 12.** Educational Programme in Nuclear Security. March 2010.
10. **IAEA Safety Report No.79.** Managing the Regulatory Bodies Competence. December 2013.
11. **IAEA Safety Standard Series NS-G-2.8.** Recruitment, Qualification and Training or Personnel for Nuclear Power Plants. November 2002.
12. **ONR Document NS-TAST-GD-065.** Function and Content of a Nuclear Baseline
13. **ONR Document NS-TAST-GD-027 Revision 4.** Training and Assuring Personnel Competence

Note: ONR staff should access the above internal ONR references via the How2 Business Management System.

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CPPNM	Convention on the Physical Protection of Nuclear Material
CS&IA	Cyber Security and Information Assurance
FSyP	Fundamental Security Principle
IAEA	International Atomic Energy Agency
NSAN	National Skills Academy Nuclear
NISR	Nuclear Industries Security Regulations
NSS	Nuclear Security Series
ONR	Office for Nuclear Regulation
SAT	Systematic Approach to Training
SNI	Sensitive Nuclear Information
SPF	Security Policy Framework
SQEP	Suitably Qualified and Experienced
SyAP	Security Assessment Principle
SyDP	Security Delivery Principle
TAG	Technical Assessment Guide

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OFFICIAL**APPENDIX 1: SYSTEMATIC APPROACH TO TRAINING**

A1.1. The systematic approach to training (SAT) is recognised as a model for assisting in identifying the training needs and for designing, planning, implementing and evaluating training programmes. It has been used in the last 20 years by several regulatory and governmental agencies, as well as many dutyholder organisations.

A1.2. The management of the dutyholder needs to assign the responsibilities for applying SAT. In some organisations, a person (or the leader of the team) is named the training coordinator (TC). Typical roles and responsibilities of the TC include:

- Planning the competence gap analysis;
- Briefing the management and staff on the conduct of the competence gap analysis;
- Organising and supervising the implementation of each step of the competence gap analysis;
- Considering how to fill the gaps by recruitment, training and outsourcing;
- Reporting the results of the analysis and recommending means to fill the gaps to the dutyholders management;
- For those gaps to be filled by training, developing a programme to provide the training needed, in consultation with other staff and management;
- Supervising the implementation of the training programme;
- Evaluating the training results;
- Suggesting future training actions or alternative measures to ensure competence in the short, medium and long term.

A1.3. SAT consists of five interrelated phases as follows:

A1.3.1 ANALYSIS

In this phase, the training needs are identified to cover those competence gaps that are to be remedied by training as determined by the gap analysis.

A1.3.2 DESIGN

Training needs and learning points related to specific competences are converted to learning objectives, including evaluation strategies, which are then organised into training plans, taking into account the available options and methods for training. An annual training programme for the dutyholder can be developed by the management with the assistance of the TC, based on the organisational strategies and the individual needs.

A1.3.3 DEVELOPMENT

In this phase, training materials and evaluation tools are prepared in accordance with the training plan produced in the design phase, so that the achievement of training objectives can be confirmed. The work performed in this phase, as well as in the design phase, ensures that the intended training is both appropriate and adequate. This work includes, among other things, the production and modification of:

- Training plans;
- Training materials (learner text, presentations and hand-outs);
- Instructor manuals;

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- Evaluation tools.

A1.3.4 IMPLEMENTATION

In this phase, training is conducted in a specific training environment, using the training materials that were created in the development phase. Specific delivery methods and tools are used to ensure that training is delivered in an effective and efficient manner.

Typical activities in this phase are:

- Deliver training through the training programme;
- Use internal or external training facilities;
- Contract and secure qualified trainers (e.g. lecturers, mentors and experts);
- Use appropriate and adequate equipment;
- Conduct training in accordance with the lesson plans;
- Use evaluation tools developed.

A1.3.5 EVALUATION

The training and development programme needs to be continually evaluated on the basis of data collected during each preceding phase. The evaluation provides feedback that can facilitate training and development programme improvements.

There are several sources of feedback:

- Course evaluation by trainees;
- Self-evaluation of performance improvement by trainees;
- Course evaluation by trainers;
- Feedback from line managers on how the training and development affected employee performance;
- Feedback from interested parties, such as contractors and non-security staff, on dutyholder security staff performance.

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