Document Preparation Profile (DPP)
Version 1.7 dated 4 November 2016

1. IDENTIFICATION

Document Category **Nuclear Security Series – Technical Guidance**

Working ID: **NST060**

Proposed Title: **Regulatory Authorization for Nuclear Security during the Lifetime Stages of Nuclear Facilities**

Proposed Action: **New document**

Review Committee(s) or Group: **NSGC**

Technical Officer(s): **Shigeaki SATO**

2. BACKGROUND

The Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (NSS No. 13) states in 3.12 that "*The State should license activities or grant authorization only when such activities comply with its physical protection regulations. The State should make provisions for a detailed examination, made by the State's competent authority, of proposed physical protection measures in order to evaluate them for approval of these activities prior to licensing or granting authorization, and whenever a significant change takes place, to ensure continued compliance with physical protection regulations*". Furthermore, in 3.20, it recommends that "*The State's competent authority should be responsible for verifying continued compliance with the physical protection regulations and licence conditions through regular inspections and for ensuring that corrective action is taken when needed".*

The IAEA anticipates publishing shortly the Implementing Guide (NST-023) *"Physical Protection of Nuclear Material and of Nuclear Facilities (Implementation of INFCIRC/225/Rev.5)"*. This Guide contains guidance on licensing procedure, review of security plan and additional general guidance on the conduct of evaluations and on an inspection programme. The IAEA is also developing an Implementing Guide (NST051) *"Security during the Lifetime of a Nuclear Facility"* which includes general guidance on the actions to be taken by a competent authority for ensuring effective implementation of nuclear security measures during each stage of the lifetime of a nuclear facility. The IAEA published the Implementing Guide "*Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme"* (NSS No. 19) in March 2013 but, like NST051, it lists the actions needed to be taken at various stages rather than providing detailed guidance on how to implement these actions. All three publications however emphasise the importance of taking into account nuclear security as early as possible in the site selection, design and construction of new nuclear facilities through the development of a comprehensive nuclear security regime by the State and its implementation by a designated competent authority, particularly through an approvals process and compliance monitoring. Whereas options available in later stages of the lifetime of a nuclear facility may be more limited, ensuring requirements are considered in partial redesigns and modifications and receive prior regulatory approval will result in nuclear security that is more efficient and effective.

The licensing processes in both safety and security legal and regulatory infrastructure for nuclear facilities differ from State to State. Those processes are based on the international obligations, national requirements and the regulatory approaches adopted by a State for a particular type of nuclear facility. However, the common factors that are present in these legal and regulatory infrastructures are the review and assessment of licensing or other authorization applications at particular lifetime stages of nuclear facilities. The IAEA Division of Nuclear Security has adopted a comprehensive, focused and systematic approach to assist Member States in establishing, maintaining and enhancing their nuclear security regimes. To this end, it proposes to work with Member States to develop Technical Guidance, based on NSS No. 13 and other relevant Nuclear Security Series (NSS) guidance, that addresses in detail the authorization/licensing process for nuclear security at each lifetime stage of a nuclear facility, including associated inspection/evaluation activities.

3. JUSTIFICATION FOR THE PRODUCTION OF THE DOCUMENT

In recent years there have been significant changes to international instruments, recommendations and guidance for the nuclear security of nuclear material and nuclear facilities. Member States continue to request additional detailed guidance regarding the responsibilities of the State's competent authority as recommended in NSS No. 13. In particular, participants at the December 2015 IAEA International Seminar, "Challenges in the Licensing of Nuclear Facilities with Respect to Nuclear Security", repeatedly suggested that the IAEA should develop guidance that focuses on the authorization process for each lifetime stage of a nuclear facility, describes details of applications (including the security plan), their review and assessment, as well as associated inspection/evaluation processes. The role of the competent authority in evaluating proposed physical protection systems (or changes to them) for approval to ensure compliance with physical protection regulations , taking into account the State's threat assessment or design basis threat and its graded approach, is critical in ensuring effective physical protection of nuclear facilities.

Whilst a number of Technical Guides have been published or are under development in the NSS in the nuclear material and facility area, these focus in the main on aspects of nuclear security at nuclear facilities rather than the role of competent (regulatory) authorities. The NSS Roadmap notes that guidance on the regulatory framework will be covered in NST002 (*Regulations and Associated Administrative Measures for Nuclear Security*) and NST023 but that consideration would be given whether more is needed when these publications have been finalized. As both have now been finalized, it is timely to provide more depth to the guidance on the nuclear security regulatory framework through the development of Technical Guides such as this one, in a manner similar to that provided on the regulatory framework in the IAEA Safety Series.

The lifetime stages of a nuclear facility that are important for nuclear security may be consistent with those lifetime stages that are important for nuclear safety. Therefore, this document will describe the authorization process during the lifetime stages of a nuclear facility in the same manner to the licensing process of nuclear safety given in the IAEA Safety Guide SSG-12 "*Licensing process for nuclear installation"*.

4. OBJECTIVE

The objective of the proposed Technical Guidance publication is to provide detailed, comprehensive guidance to Member States' competent (regulatory) authorities on the authorization process for nuclear security during lifetime stages of nuclear facilities. It aims to guide Member States' competent authorities through a sequential and systematic process of regulatory authorizations (based on the IAEA NSS as well as insights from the licensing processes of Member States) during the lifetime

stages of nuclear facility. While the publication is primarily designed to assist competent authorities responsible for the authorization process for nuclear security of nuclear facilities, applicants, licensees and other stakeholders involved in the authorization activity may also benefit from the guidance in this publication.

5. SCOPE

The scope of the proposed publication will be the authorization process for security applied at each of the lifetime stages of a nuclear facility.

It will include discussion of the topics and required documents (such as security plan) to be considered at each stage (siting and site evaluation, design, construction, commissioning, operation, cessation of operation, decommissioning and release from regulatory control). It will provide further detail on the review and assessment of the licensee's applications, the associated inspections by the competent authority to verify conformance with regulatory requirements, and enforcement actions to be taken by the competent authority in case of failure to comply with the regulatory requirements. The document will address each lifetime stage.~~will provide further detail on the review and assessment of the licensee's applications and the associated inspections by the competent authority at each lifetime stage to verify conformance with regulatory requirements.~~ Some of these stages may be grouped together, depending on type of facility. It will also provide guidance for authorization of transport of nuclear material to and from nuclear facilities.

Although intended for nuclear facilities, the concepts and guidance in this publication may also be applied, with a graded approach, to facilities and activities involving other radioactive material.

6. PLACE IN THE OVERALL STRUCTURE OF THE RELEVANT SERIES AND INTERFACES WITH EXISTING AND/OR PLANNED PUBLICATIONS

The document is proposed as Technical Guidance in the Nuclear Security Series. It will support the implementation of the relevant Recommendations level document NSS No. 13 and the more specific guidance provided in the Implementing Guide NSS 25-G (*Use of Nuclear Material Accounting and Control for Nuclear Security Purposes at Facilities*) and the draft Implementing Guides NST023, NST002 and NST051. It will take note, as necessary, of other relevant Implementing Guides and Technical Guidance in the NSS as well as relevant Technical Guidance documents in development.

As a Technical Guidance document, this publication will not formally be an interface document with safety, but some informal coordination may be necessary, particularly with nuclear safety. The publication will aim to be consistent with and complementary to relevant safety standards, namely "Licensing Process for Nuclear Installations" (SSG-12), and the revised Safety Guides on regulatory bodies DS472 and DS473.

7. OVERVIEW

This Technical Guidance document will describe all major aspects of regulatory authorization/licensing for nuclear security during lifetimes stages of nuclear facilities (*i.e.* siting, design, construction, commissioning, operation, cessation of operation, decommissioning and release from regulatory control). It will present a comprehensive approach to guiding Member States, especially those with nuclear power plants and research reactors, on new-build and/or relicensing programmes, including the review & assessment of security plans, physical protection systems and measures requiring prior authorization within a regulatory framework.

A tentative outline contents of the proposed document is as follows:

1. **Introduction**
   - 1.1. Background
   - 1.2. Purpose
   - 1.3. Scope
   - 1.4. Structure
2. **Lifetime stages of nuclear facilities**
   - 2.1. Introduction
   - 2.2. Siting
   - 2.3. Design
   - 2.4. Construction
   - 2.5. Commissioning
   - 2.6. Operation
   - 2.7. Cessation of Operation
   - 2.8. Decommissioning
   - 2.9. Release from regulatory control
3. **Regulatory authorization (submittals, regulatory review and assessment)**
   - 3.1. Introduction
   - 3.2. Basic licensing principles and evaluation considerations
   - 3.3. Siting
     - 3.3.1. Submittal
     - 3.3.2. Review and assessment
   - 3.4. Design
     - 3.4.1. Submittal
     - 3.4.2. Review and assessment
   - 3.5. Construction
     - 3.5.1. Submittal
     - 3.5.2. Review and assessment
   - 3.6. Commissioning
     - 3.6.1. Submittal
     - 3.6.2. Review and assessment
   - 3.7. Operation
     - 3.7.1. Submittal
     - 3.7.2. Review and assessment
   - 3.8. Cessation of Operation
     - 3.8.1. Submittal
     - 3.8.2. Review and assessment
   - 3.9. Decommissioning
     - 3.9.1. Submittal
     - 3.9.2. Review and assessment
   - 3.10. Release from regulatory control
     - 3.10.1. Submittal
     - 3.10.2. Review and assessment
4. **Review and authorisation of changes to the facility that might affect nuclear security** ~~**Re-licensing process and licence modification**~~
5. **Regulatory inspection**
   - 5.1. Introduction
   - 5.2. Basic inspection principles and evaluation considerations**, and enforcement actions taken in case of failure to comply with the regulatory requirements**
   - 5.3. Siting

5.4. Design
5.5. Construction
5.6. Commissioning
5.7. Operation
5.8. Cessation of Operation
5.9. Decommissioning
5.10. Release from regulatory control

6. Transport of nuclear ~~fuel~~material

6.1. Introduction
6.2. Submittals
6.3. Authorization
6.4. Inspection

7. References

8. PRODUCTION SCHEDULE: Provisional schedule for preparation of the document, outlining realistic expected dates for:

STEP 1: Preparing a DPP	DONE
STEP 2: Approval of DPP by the Coordination Committee	Sept 2016
STEP 3: Approval of DPP by the relevant review Committees	Nov 2016
STEP 4: Approval of DPP by the CSS	
STEP 5: Preparing the draft	2017 Q1 + Q2
STEP 6: Approval of draft by the Coordination Committee	Aug 2017
STEP 7: Approval by the relevant review Committees for submission to Member States for comments	Nov 2017
STEP 8: Soliciting comments by Member States	Dec 2017
STEP 9: Addressing comments by Member States	2018 Q2
STEP 10: Approval of the revised draft by the Coordination Committee Review in NS-SSCS	Sept 2018
STEP 11: Approval by the relevant review Committees	Nov 2018
STEP 12: Endorsement by the CSS	
STEP 13: Establishment by the Publications Committee and/or Board of Governors (for SF and SR only))	Jan 2019
STEP 14: Target publication date	Mid 2019

9. RESOURCES

It is estimated that the preparation of a draft revised original document for a training course will require 2-3 consultancy meetings.

Secretariat resources	**Person Weeks**	
• Meeting support and planning (3 meetings)	5	
• Document drafts and edits	3	
• Document administration	3	
Total	11	
Member State resources (meetings)	**People**	**Dates**
1. Consultancy meeting – Draft review	5-10	
2. Consultancy Meeting – Draft development	5-10	
3. Consultancy meeting – Final draft review	5-10	