

**Regulatory Inspection and Enforcement
Document Preparation Profile (DPP)
Draft version 4, 7 December 2021**

1. IDENTIFICATION

Document Category: Technical Guidance

Working ID: NST068

Proposed Title: Regulatory Inspection Programme and Enforcement Measures for Nuclear Security During the Lifetime of a Nuclear Facility

Proposed Action: New document

Review Committee(s) or Group: Nuclear Security Guidance Committee (NSGC)

Technical Officer(s): K. Horvath, NSNS/MAFA/NMS

2. BACKGROUND

A regulatory inspection programme for nuclear facilities and enforcement actions for physical protection regulations are vital components of a State's legislative and regulatory framework for nuclear security. Such a programme and associated enforcement actions are used to verify compliance with the physical protection regulations and licence conditions and to ensure that corrective action is taken when needed.

With respect to the legislative and regulatory framework, Fundamental Principle C of the Convention on the Physical Protection of Nuclear Material as amended (INFCIRC/274/Rev. 1/Mod. 1) states: "The State is responsible for establishing and maintaining a legislative and regulatory framework to govern physical protection. This framework should provide for the establishment of applicable physical protection requirements and include a system of evaluation and licensing or other procedures to grant authorization. This framework should include a system of inspection of nuclear facilities and transport to verify compliance with applicable requirements and conditions of the license or other authorizing document, and to establish a means to enforce applicable requirements and conditions, including effective sanctions."

Further, para. 3.20 of IAEA Nuclear Security Series (NSS) No. 13, *Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)*, states: "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."

Additional guidance on the recommendations regarding the establishment and implementation of an inspection programme by the competent authority and associated enforcement actions is also provided in *Physical Protection of Nuclear Material and Nuclear Facilities (Implementation of INFCIRC/225/Revision 5)* (NSS No. 27-G). Other NSS guidance publications advising the establishment of an inspection programme and enforcement actions include *Developing Regulations and Associated Administrative Measures for Nuclear Security (NSS No. 29-G)* and *Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme (NSS No. 19)*.

Limited information on regulatory inspections is also provided in the context of authorizations in the Technical Guidance provisionally entitled *Regulatory Authorization and Inspection for Nuclear Security during the Lifetime of a Nuclear Facility* (currently under development as NST060). NST060 focuses on regulatory inspections to be done to support the authorization activity, including reviewing information submitted in the application and verifying its accuracy (some countries name these actions “observations”), and it does not cover regulatory inspections aiming at the verification of regulatory requirements and authorization conditions.

However, as of yet, the Nuclear Security Series provides no specific guidance to States on how to conduct inspections in line with Fundamental Principle C of the CPPNM as amended. Many States request attendance at training courses addressing regulatory inspections at nuclear facilities, expressing a need for guidance on this topic. The need for more detailed guidance on this topic is also frequently raised during Integrated Nuclear Security Support Plan (INSSP) meetings.

3. JUSTIFICATION FOR THE PRODUCTION OF THE DOCUMENT

The proposed publication will provide guidance to States for effectively designing, implementing, and managing an inspection programme and associated enforcement actions.

As noted in the previous section, the establishment and implementation of an inspection programme and enforcement actions are recommended in NSS No. 13, and are necessary to effectively implement Fundamental Principle C of the CPPNM as amended. However, detailed guidance on how to effectively design and implement such an inspection programme and enforcement actions is not provided in existing NSS publications. Notably, the existing guidance does not provide detail on criteria for establishing an inspection programme, how an inspection programme should be managed, and on establishing an enforcement programme.

NST060 includes principles and considerations for inspection and enforcement, but only in relation to authorization and it does not provide detailed information on performing inspections, such as: what to look for during inspections of physical protection systems; specific inspection considerations for “walkdowns” of the facility; and other things that inspectors need to be aware of when in the facility.

It would not be reasonable to include this information in a revision of an existing publication, as it is at a much more detailed level than the information provided in NSS No. 27-G on any individual topic, so it would be complementary to this publication. Further, while the inclusion of this information in NST060 by extending its scope would be possible, doing so would introduce an undesirable delay in providing the needed guidance to States, as NST060 was recently approved by the NSGC at Step 11. Rather, it could be seen as a companion publication to NST060.

4. OBJECTIVE

The purpose of the proposed publication is to provide guidance on the elements of an effective inspection programme and associated enforcement actions in order to support States in designing and implementing such programmes and actions. Users include competent authorities and operators of nuclear facilities.

5. SCOPE

This publication describes the elements of an effective inspection programme and enforcement actions at a nuclear facility and provides considerations for how to implement them by competent authorities. The new Technical Guidance applies only to the physical protection of nuclear material and nuclear

facilities during their entire lifetime; it does not cover safety aspects or authorization; however it touches the interface and coordination with inspections and enforcement actions for safety.

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

The new Technical Guidance will interface with other IAEA Nuclear Security Series publications that explicitly call for or provide general guidance on inspection programmes and enforcement actions, including the following (the list is not exhaustive):

- Objective and Essential Elements of a State's Nuclear Security Regime (NSS No. 20);
- Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5) (NSS No. 13);
- Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme (NSS No. 19);
- Physical Protection of Nuclear Material and Nuclear Facilities (Implementation of INFCIRC/225/Revision 5) (NSS No. 27-G);
- Developing Regulations and Associated Administrative Measures for Nuclear Security (NSS No. 29-G);
- Regulatory Authorization and Related Inspection for Nuclear Security during the Lifetime of a Nuclear Facility (under development as NST060).

The IAEA Safety Standards Series publications already cover many topics on regulatory inspection and enforcement, including in *Governmental, Legal, and Regulatory Framework for Safety* (GSR Part 1 (Rev. 1)), *Establishing the Safety Infrastructure for a Nuclear Power Programme* (SSG-16 (Rev. 1)), *Functions and Processes of the Regulatory Body for Safety* (GSG-13), and *Organization, Management and Staffing of the Regulatory Body for Safety* (GSG-12). Information on safety related aspects of this topic is also provided in the *Handbook for Regulatory Inspectors of Nuclear Power Plants* (IAEA-TECDOC-1867) and in *Development of a Regulatory Inspection Programme for a New Nuclear Power Plant Project* (Safety Reports Series No. 81).

7. OVERVIEW

A provisional table of contents for the draft is as follows:

1. INTRODUCTION

- 1.1. Background
- 1.2. Objective
- 1.3. Scope
- 1.4. Structure

2. GENERAL GUIDANCE FOR INSPECTION AND ENFORCEMENT

- 2.1. Relevant IAEA Nuclear Security recommendations and guidance
- 2.2. Purpose and goals of regulatory inspection and enforcement
- 2.3. Inspection basics, various type of inspections
- 2.4. Enforcement basics, various enforcement actions
- 2.5. Interfaces and coordination with the inspection programme and enforcement actions for nuclear safety

3. REGULATORY INSPECTION PROGRAMME

- 3.1. Roles and responsibilities
- 3.2. Planning phase of the inspection
- 3.3. Performance phase of the inspection
- 3.4. Evaluation phase of the inspection
- 3.5. Reporting phase of the inspection
- 3.6. Conduct and objectivity of inspectors
- 3.7. Follow-up of inspection findings

4. CONSIDERATIONS FOR PERFORMING INSPECTIONS DURING THE LIFETIME OF A NUCLEAR FACILITY

- 4.1. Siting
- 4.2. Design
- 4.3. Construction
- 4.4. Commissioning
- 4.5. Operation
- 4.6. Cessation of operation
- 4.7. Decommissioning

5. SPECIFIC CONSIDERATIONS FOR INSPECTIONS

- 5.1. Operation of physical protection system
- 5.2. Maintenance of the physical protection system
- 5.3. Computer security
- 5.4. Access control, searches of personnel, vehicles, material
- 5.5. Training programme
- 5.6. Guard and response force performance, including exercises to test their training and readiness

Annex: Inspection checklists

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

STEP 1: Preparing a DPP	2021 Q3
STEP 2: Approval of DPP by the Coordination Committee	2022 Q1
STEP 3: Approval of DPP by the relevant review Committees	June 2022
STEP 4: Approval of DPP by the CSS	
STEP 5: Preparing the draft Indicate as to whether a TM is expected to be organized for the preparation of the draft	June 2022 – December 2023
STEP 6: Approval of draft by the Coordination Committee	January 2024
STEP 7: Approval by the relevant review Committees for submission to Member States for comments	June 2024
STEP 8: Soliciting comments by Member States	July - October 2024
STEP 9: Addressing comments by Member States	October - December 2024
STEP 10: Approval of the revised draft by the Coordination Committee Review in NSOC-SGDS (Technical Editorial review)	January 2025

STEP 11: Approval by the relevant review Committees	June 2025
STEP 12: - Submission to the CSS - Submission in parallel and approval by the Publications Committee - MTCD Editing - Endorsement of the edited version by the CSS	
STEP 13: Establishment by the Publications Committee and/or Board of Governors (for SF and SR only))	
STEP 14: Target publication date	2026 Q2

*

9. RESOURCES

It is estimated that the development of the Technical Guidance will involve approximately 16 weeks of efforts by the technical officer in NSNS. Member State expert resources involved are estimated at 4 to 5 weeks for Consultancy Meetings and 30 days for home based assignments. In addition, a Technical Meeting is planned to review and discuss the draft.