42nd Meeting of the Radiation Safety Standards Committee

12-14 June 2017

Agenda Item R. 5.1

Preventive Measures for Material Out of Regulatory Control

STEP 11: Approval to submit to DDG-NS for Publication

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Outline

• Objective and scope
• History of NST.011
• Comments from NSGC
• Document Overview
Objective and Scope: DPP
August 2011

• “…to provide guidance on the development of national strategy and establishment of proper infrastructure and capabilities for preventive measures to deter criminal or unauthorized acts with nuclear security implications involving nuclear and other radioactive material out of regulatory control.”

• “…focus on the preventive measures including deterrence measures, information security, public awareness and trustworthiness of personnel involved in nuclear security”
Recommendations for MORC

Nuclear Security Regime for MORC - Objectives are achieved through:

• Legislative and regulatory framework
• Sufficient and sustained resources to competent authorities
• **Preventive Measures**
• Detection Measures
• Response measures for nuclear security event

- Deterrence
- Information Security
- Trustworthiness of Personnel
Nuclear Security for MORC
Prevention, Detection and Response Measures

Material Origin
Material Transport
Material Use
Material Disposal
Material Loss or Theft

Preventive Measures
Detection Measures
Response Measures

Material Under Regulatory Control
Material Out of Regulatory Control
What is a ‘Preventive Measure’?

• Undefined in NSS-15 and in current draft but. In NSS15, the term “Preventive Measure for Nuclear and other Radioactive Material” is understood as all other “complementary” measures to ”Legislative Provisions”, “Detection” and “Response” for material out of regulatory control (NSS15: § 2.1).

• From NSS-8 Preventive and Protective Measures against Insider Threats
  – The term ‘preventive measures’ is used to describe measures to preclude or remove possible insiders, or to minimise threat opportunities, or to deter or prevent a malicious act from being carried out.
  – The term ‘protective measures’ is used to describe measures to deter, detect, delay, and respond to malicious acts that are carried out; and to mitigate or minimise their consequences.

Preventive Measures focus on influencing an adversary’s decision making for committing a criminal or intentional unauthorized act with MORC.
History of NST011

(1) Prepare DPP August 2011

(2) Approval by Coordination Committee

(3) Approval of DPP by Adsec

(4) Approval of DPP by CSS

(5) Prepare Draft

CM (15-19 April 2013)

CM (22-26 April 2013)

CM (2-6 Sept 2013)

(6) Approval by Coordination Committee

(7) Approval by NSGC/RASSC

Rejected

(5) Prepare Draft

CM (17-20 February 2015)

CM (11-14 January 2016)

(8) Approval for 120 days review by MS
Experts involved in the Document Preparation

• 5 Consultancy meetings
  – 11 Experts from 7 States:
    • India, France, Greece, Mexico, Russian Federation, United Kingdom, United States of America
  – 1 Technical Meeting with 28 participants from 23 States

More than 50 experts participated in this document preparation.

• 2 NSGC previous reviews during NSGC 5 and NSGC 10
• 120 Days review by Member States
STEP 11: Approval to submit to DDG-NS for Publication

• 45 preliminary comments were expressed by Finland, Hungary, India, Malaysia, Pakistan, Sweden, Tajikistan and United States of America representatives during the 120 days review process.

• All of them have been accepted or clarified and the text was amended accordingly before being submitted to NSGC members and RASSC members before this meeting.

• No RASSC member comments before the meeting.
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- Basis for establishing Preventive Measures.
  - Legal and regulatory Framework
  - Competent Authorities and Coordination Mechanism
  - Threat assessment and risk informed Approach
- Preventive effect of Detection and Response Measures.
Detection and Response Measures

The detection measures can contribute to preventing a criminal or intentional unauthorized act with nuclear security implications involving MORC by detecting material that is out of regulatory control before it can be used for such an act.

The detection and response measures can also contribute to the same objective by deterring adversaries from attempting such an act and reducing the likelihood of such an act being carried out successfully.
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   - Deterrence by Punishment
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Deterrence Measures

• (1) those relying on communicating that there is a significant threat of punishment for attempting criminal or intentional unauthorized acts
• (2) those relying on communicating that the success of such acts is prohibitively difficult or unlikely.
• These two types of deterrence are referred to, respectively, as “deterrence by punishment” and “deterrence by denial.” Both types can be useful and complementary.
Public Information on Deterrence Measures

• The messages should communicate to the adversary that the likelihood of failure (deterrence by denial) or of being detected, identified, punished, or injured in the course of handling such material (deterrence by punishment) outweighs the perceived benefits of their actions.
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Information Security

• Sensitive information therefore includes information on nuclear security systems and measures for prevention of, detection of, and response to criminal or intentional unauthorized acts with nuclear security implications involving MORC, or that may otherwise assist in carrying out such acts.
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Nuclear Security Culture

• Nuclear security culture plays a key role in ensuring that individuals, organizations and institutions remain vigilant and that sustained measures are taken to counter threats.
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Insider Threat

• This process should confirm the trustworthiness of personnel with access or authority or knowledge and involved in detection and response measures, to the appropriate levels for their roles, thereby reducing the risk of authorized personnel engaging in illegal activities and becoming insider threats.
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International Cooperation and Assistance

• As in many other areas (drugs, arms or human trafficking, financial manipulation, etc.) adversaries may seek to shield themselves and evidence of their activities from detection by dividing them between different jurisdictions.

• If effective arrangements for mutual cooperation among States in addressing transboundary offences is lacking, adversaries may attempt to immunize themselves and their organizations from detection and prosecution by dispersing or concealing the proceeds of their illicit activities beyond the national territory in which the offence was committed. Therefore, international cooperation with respect to offences involving MORC can enhance deterrence measures.
Summary

• More than 50 experts participated in the document preparation.
• Document was updated accordingly to NSGC 5 and NSGC 9 comments with attention to remove any out of scope content.
• Opportunity for experts to clarify Preventives measures for MORC.
• Last NSGC concluded that document was ready for NSGC approval for 120 days review by Member states.
• Xx Members states comments have been incorporated.
• More consistency and complementarity with Nuclear Security Series.
• No NSGC members or RASSC members comments before this meeting.
Thank you!