1st Meeting of the
EMERGENCY PREPAREDNESS AND RESPONSE
COMMITTEE (EPReSC)

30 November to 2 December 2015

Agenda Item EP4.5
Activities and guidance under development
in nuclear security area

Ian Barraclough
Scientific Secretary, NSGC
Nuclear Security Series

- Established 2006
  - Pre-NSGC approvals by AdSec
- Guidance, not standards
  - No ‘shall’ statements
  - Prime responsibility for security rests with State
- Consistent with CPPNM, ICSANT, UNSCR 1540, etc
- Published – NSS No….
- During development – NST…

IAEA
Nuclear Security Series categories

**Fundamentals**
- Specify the objective and essential elements of a State’s nuclear security regime

**Recommendations**
- Set out measures that States should take to achieve and maintain an effective nuclear security regime consistent with the Fundamentals

**Implementing Guides**
- Provide guidance on means by which States could implement the measures set out in the Recommendations

**Technical Guidance**
- Provides guidance on specific technical subjects to supplement the guidance set out in Implementing Guides
Nuclear Security Fundamentals
- Objective and essential elements of a State’s nuclear security regime

Nuclear Security Recommendations
- for nuclear material and nuclear facilities (INFCIRC/225/Rev. 5)
- for radioactive material and associated facilities
- for nuclear and other radioactive material out of regulatory control

Implementing Guides
- Nuclear security culture
- Preventive and protective measures against insider threats
- Security in the transport of radioactive material
- Development, use and maintenance of the design basis threat
- Security of radioactive sources
- Nuclear security systems and measures for major public events
- Establishing the nuclear security infrastructure for a nuclear power programme
- Nuclear security systems and measures for the detection of material out of regulatory control
- Radiological crime scene management
- Security of nuclear information
- Use of NMAC systems for nuclear security purposes at facilities
- Risk informed approach for nuclear and other radioactive material out of regulatory control
- Nuclear forensics in support of investigations
- Security of nuclear material in transport

Technical Guidance
- Technical and functional specifications for border monitoring equipment
- Monitoring for radioactive material in international mail transported by public postal operators
- Engineering safety aspects of the protection of nuclear power plants against sabotage
- Identification of radioactive sources and devices
- Combating illicit trafficking in nuclear and other radioactive material
- Educational programme in nuclear security
- Identification of vital areas at nuclear facilities
- Computer security at nuclear facilities
Meaning of ‘out of regulatory control’

• Nuclear or other radioactive material
• Nature and quantity of material such that it should be under regulatory control
• Control absent because control measures have failed for some reason, or because they never existed
• Includes material stolen or being trafficked, but also lost or of unknown origin
Established March 2012
  • Second term, 2015 to end of 2017
• Reports to DDG-NS, not CSS
• Chair: Bart Dal, Netherlands
• Currently 65 Member States have nominated members
  • Includes 10 corresponding members
• 8 observer organizations
  • EC(JRC), ENISS, EUR, IEC, ISSPA, WINS, WNA, WNTI
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<td>Approval by NSGC (and clearance by SSC(s)) for submission to DDG-NS</td>
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<td>12*</td>
<td>Possible further review if requested by DDG-NS (interface documents only)</td>
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Roadmap for NSS publications

- Working basis for guidance development, agreed with NSGC
  - Subject to NSGC decisions on individual documents (at 3 stages of development)
  - Subject to change with NSGC’s agreement
- General ‘top down’ approach
  - Fundamentals and Recommendations in place, so priority is to complete Implementing Guides
  - Plans for Technical Guidance tentative at present – to be confirmed when Implementing Guides well advanced
- Aim for guidance with broadest useful scope
  - Implementing Guides on cross-cutting themes applicable to all areas of nuclear security
  - Common guidance for all regulated materials and facilities (nuclear and radioactive) where appropriate
- Risk-informed prioritization
Fundamentals + 3 Recommendations

Cross-cutting Implementing Guides

Specific guidance in thematic areas

Column 1
Nuclear material & nuclear facilities

Column 2
Radioactive material & associated facilities

Column 3
Nuclear & other radioactive material out of regulatory control

Common conceptual headings

Implementing Guides
Technical Guidance
Interim guidance
To be decided
Interfaces between security and EPR

- An emergency may be caused by an accident or a nuclear security event – emergency response is needed in either case.
- A nuclear security event may or may not lead to an emergency – response to the event is needed even if there is no emergency.
- Preparedness for and response to a nuclear security event = security.
- Preparedness for and response to an emergency = EPR.
- Possible response objectives:
  - Common – e.g. if the material can be recovered (security), this also removes the hazard (safety).
  - EPR – e.g. protect workers and public.
  - Security – e.g. stop adversary, collect evidence, secure the facility.
- Response potentially needed at same place and same time:
  - Actions need to be coordinated.
- In real situations, distinctions may not be so clear…
Potential interface documents with EPReSC

- No plans to revise Fundamentals
- No approved plan for new or revised Recommendations
  - Possible addenda to address computer security (would be interface with all SSCs)
- Implementing Guides
  - See following slides
- Technical Guidance
  - Not formally interface documents (4th tier, equivalent to Safety Reports or EPR)
  - Informal interface arrangements for selected documents
NST004 National framework for managing response to nuclear security events

- Cross-cutting for all areas of security
  - Events at nuclear facilities
  - Events at other associated facilities
  - Events during transport
  - Events involving material out of regulatory control
- Overall framework for response, not detail
  - Responsibilities
  - Planning resources, capabilities needed for different types of event
  - Categorizing events
  - Graded response to different types of event
  - Interface with response to any associated emergency
- MS consultation (Step 8) just completed
  - Final draft incorporating MS comments, for submission to DDG-NS, expected in 2016
NST005 Regaining control over material out of regulatory control

- Interface with RASSC, TRANSSC, WASSC – and EPReSC
- Following detection of nuclear or other radioactive material that is of security concern
  - May or may not also be of safety concern
  - May or may not also be an emergency
- No detail on detection or recovery of the material
  - Covered in response/contingency plans – separate guidance planned, recognize there will be interfaces with EPReSC
- Focused on follow-up actions to ensure that security controls over the material are (re-)applied and maintained, under control of authorized person
  - Interface with investigation of incident (security, possibly safety)
  - Interface with SSCs in cases where safety controls also needed
- Currently drafting (Step 5)
  - Draft for submission to MS expected in 2016
NST006 Framework for international cooperation and assistance

- …on nuclear security
- International cooperation and assistance referred to in Fundamentals, Recommendations and many Guides
- Started drafting (Step 5), but
  - Assistance available to States to improve their national nuclear security regime is better covered in context of specific technical area of security (and therefore in specific Guides)
  - Cooperation to improve international nuclear security addressed more through legal instruments, bilateral agreements, etc. – not material for an Implementing Guide
  - Remaining material more like a brochure of IAEA services
- Not likely to continue in current form
NST041 Preventive and protective measures against insider threats

- Revision of existing Implementing Guide NSS No. 8
- Addresses measures against insiders who might attempt to carry out or facilitate:
  - Unauthorized removal of material
  - Sabotage of a facility or activity
- Such actions could lead to an emergency
- Response measures could be exploited (or undermined) by an insider
- MS consultation completed, comments being addressed (Step 9)
  - Final draft incorporating MS comments, for submission to DDG-NS, expected in June 2016
NST051 Nuclear security during the lifetime of a nuclear facility

- Existing guidance focuses on security during operation
- NST051 focuses on security before (and after) operation
  - Siting
  - Design (including security by design)
  - Construction
  - Decommissioning
- Will include preparedness for and response to nuclear security events during these phases
  - Interface with EPR during these phases
- Currently drafting (Step 5)
  - Draft for submission to MS expected in 2016
NST056 Preparing and exercising a contingency plan for a nuclear facility

- Technical Guidance, so not formally interface document
- Relates to operator’s contingency plan for responding to nuclear security events at the facility
- Obvious interfaces with
  - Operator’s emergency plan
  - National response plans for nuclear security events and emergencies
- DPP approved by NSGC in November meeting
  - Propose to treat informally as interface document with EPRReSC
- Expect proposal in 2016 for document addressing national response plan for nuclear security events
  - Also expect to treat informally as interface document with EPRReSC
### Implementing Guides not proposed as interface documents

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NSGC forthcoming meetings

- 9th meeting – 20-24 June 2016
- 10th meeting – 14-18 November 2016
- 11th meeting – 19-23 June 2017