Threat Assessment and DBT for the Nuclear Sector in Belgium

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Contents of the presentation

- Latest developments in physical protection of nuclear materials, installations and transport
- Value of the DBT
- Developing a Design Basis Threat
- Use of the DBT in the new agreement reports on physical protection of nuclear materials, installations and transport
- Maintaining the DBT
- On-going project and challenges ahead

Latest developments in physical protection of nuclear materials, installations and transport

- Update of the legal and regulatory framework to take into account
  - → latest international developments of the Infirc 225 – CPPMN amended in 2005
  - → operational experience
- Our new legal and regulatory framework consists of
  - → modification of the law '94 (organic FANC Law) and the law of '98 concerning security clearances and security verifications

Latest developments in physical protection of nuclear materials, installations and transport

→4 Royal Decrees

- RD Categorisation
- RD physical protection measures
- RD security clearances (trustworthiness)
- RD physical protection of nuclear sensitive information in its various forms

Value of the DBT

- Physical protection system is designed to prevent adversaries from successfully committing a malicious act
- Therefore we need a sufficiently detailed description of the threat
- Otherwise it would be difficult to determine with precision the level of protection that could lead to an ineffective allocation of protection resources

Developing a Design Basis Threat

- Close cooperation between the **C**oordination **U**nit for the **T**reat **A**nalyses (CUTA) and the FANC, with involvement of the operator.

- 1st stage : Threat assessment for the nuclear sector (NPP, other nuclear facilities, nuclear transport) at
  - Global level
  - Belgian level.

Developing a Design Basis Threat

- 2nd stage : Sectorial DBT
  - → In accordance with the international guidelines
  - → Definition of potential generic adversaries with:
    - Description of potential generic adversaries
    - Information about their motivation, intention, modus operandi and capacities
  - → The DBT was communicated to the different concerned operators during bilateral meetings
  - → DBT is a classified document (need to know)
  - → DBT also applicable to transportation

Developing a Design Basis Threat

- 3rd stage : DBT at facility level
  - → Formalize the use of the DBT
  - → Operator is required to interpret the DBT
  - → Essential tool in the elaboration of the design, implementation of a physical protection system and to assess its efficiency
  - → Tool developed by the competent auth. based on :
    - Analysis of risk probabilities
    - Elaboration of scenarios
    - Knowledge and analysis of the local risk factors (topography, economical and social environment, level of public acceptation for nuclear activities, …)

Use of the DBT in the new agreement reports on the physical protection of nuclear materials, installations and transport

- Agreement report includes different chapters :
  - → Categorization
  - → Physical protection levels
  - → DBT
  - → Organization
  - →….
- Assessment will be a combination of features/ assessment based

Maintaining the DBT

- Sectorial DBT will be reviewed every 3 year
- If needed, reviewed in case of significant :
  - → event
  - → change in adversary tactics or methods
  - → change in domestic or international regulations, laws, policies
- Close cooperation between CUTA & FANC
- Early warning system to inform the operators
- REX on international & national nuclear security incidents

On-going projects and challenges ahead

- Development of a specific DBT for :
  - → Radioactive waste storage facilities
  - → Myrrha project
  - → New regulatory framework radioactive materials (sealed, non sealed sources, waste treatment facility, transport)
  - → Cyber-security
  - → Insider threat

Thank you for your attention