The Development of Guidelines for the Transport of Nuclear Material in Germany

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The Federal Republic of Germany

- 16 Federal States (Bundesländer)
- Supervisory of Transports lies within the Länder authorities

https://www.weltkarte.com/typo3temp/images/bundeslaender.png
Transports in and through Germany

- About **400** transports of Nuclear Material each year
- Most of them **Category III**
- Nuclear Material is mostly transported by **road**
- Most of them are **transits**
  - Poland -> Belgium
  - Czech Republic -> Netherlands
- To transport Nuclear Material in or through Germany a **license** is required
Transports in and through Germany

• Act on the Peaceful Utilisation of Atomic Energy and the Protection against its Hazards (Atomic Energy Act, AtG)
• §4 AtG describes the requirements
• Security measures have to be fulfilled according §4 no. 5 AtG
  • If “the necessary protection has been provided against disruptive action or other interference by third parties”, the license shall be granted
Development of German Guidelines

- Basic for Guidelines is the national Design Basis Threat (DBT)
- Evaluation every 3 years or in case of an unusual new finding
- If DBT changes
  - Guideline rework
  - Cooperative working group of authorities of the interior and the Länder authorities
Development of German Guidelines

- **Public Notice**
  - BMUB

- **Länder Committee for Nuclear Energy (LAA)**
  - General Committee (LAA HA)

- **Conference of Interior Ministers (IMK)**
  - WG II “Internal Security”
  - Subcommittee “Command, Operation, Suppression of Crime” (FEK)

- **Committee on Nuclear Safety (FARS)**

- **WG on Nuclear Security (AK Sicherung)**

- **Development and Evaluation**
  - Comments: Associations, Stakeholders

- **Final Guideline**
  - Draft guideline

- **Authorities under Nuclear Legislation**
  - Working Groups

- **Authorities of the Interior**
German Guidelines in Context of Laws

- **Basic Law**
  - Constitution
- **Acts**
  - e.g. aCPPNM, Atomic Energy Act
- **Ordinances**
  - e.g. Radiation Protection Ordinance, Nuclear Reliability Verification Ordinance
- **Guidelines**
  - e.g. Design Basis Threat(s), Malicious Acts Guidelines
- **Other Rules**
  - e.g. governmental letters, committee decisions, standards (DIN, ISO, KTA)

Federal legislator

Federal Government, Federal Council

Federal Government, Land authorities

Technical Experts

- Generally binding
- Binding by specification in the licence or by supervisory measures in the individual case
Licensing Process according to §4 AtG

1. Application for a transport licence including security concept, contingency plans and supplementary documents
2. Assessment of the documents
3. Participation of the KoSikern*
4. If needed: commissioning of third party experts (TSOs)
5. Include the comments from the KoSikern* in the draft
6. Granting the licence for the transport

*group of experts from members of the interior of the Länder
The New Transport Guideline

- Guideline especially for transports on road and by train
- Nuclear Material is categorized analog to NSS 13
- Guideline is classified as restricted
The New Transport Guideline

• Contains measures for the different parts of the transport (e.g. vehicle, transport control center) ordered by category of the material

• Contains chapters with requirements for
  • organisation
  • over all measures
  • cooperative work with police forces

• Requirements in general higher compared to old Guideline
New General Objective:

Prevent:

Unauthorized Removal

Unacceptable Radiological Consequences after Unauthorized Removal

Unacceptable Radiological Consequences of a Sabotage Act
The New Transport Guideline - Big Point 2

• New categorization:

  Calculation of radiological consequences in case of a Sabotage Act
  - Consequences higher than defined value
  - Categorization in Release-Relevant Material
  - Additional measures are required (e.g. second protection layer around the cask)

• Additional talk about the calculations by Ms. Döhler, GRS
Summary

- German DBT evaluation every 3 years leads to rework of guidelines
- Guidelines are created in close collaboration between the Federal State and the Länder
- TSOs and interior of the Länder are involved in licensing process
- Guidelines contain measures ordered by the category of the Nuclear Material (analog to NSS 13)
- New Transport Guideline contains third General Objective and requires additional calculations of the radiological consequences
Thank You for your Attention!