Nuclear facilities in the Slovak Republic

Bohunice Site
Mochove Site
Introduction

- Common aim of nuclear safety and nuclear security is protection of persons, assets, society and the environment from the harmful effects of ionizing radiation. The ways how they achieve its goal are different. Also the approach to nuclear safety and nuclear security was different in the past.

- After Chernobyl accident the international, and also attention of Slovakian regulator was focused on improvement of nuclear safety of operation of nuclear installation. During this time period Slovakian nuclear installations have been upgraded, new safety systems have been added, the seismic resistance has been improved and also nuclear safety culture has been improved. The Fukushima accident has stressed the importance of nuclear safety, safe operation and its continuous improvement.
Introduction
(continued)

- At the same time the nuclear security was a little bit in the shadow of nuclear safety. Nevertheless, also in this area a significant progress was made. In the beginning of nineties, the physical protection systems were upgraded. The essence of the change was the transition from armed guard to building a physical protection system consisting of technical elements such as cameras, sensors, etc.

- This presentation describes two of main interfaces between nuclear safety and nuclear security, one of them shows positive interaction between safety and security, the other one shows problems and difficulties.
Safety Security Interfaces

- The Western European Nuclear Regulators' Association (WENRA) in April 2017, decided to create a Task Force, including nuclear safety and nuclear security experts, in order to identify challenging interface issues and areas of cooperation between nuclear safety and nuclear security.

- The interface between nuclear safety and nuclear security is an important aspect for nuclear regulators. A mandate for this Task Force was drafted by the Technical Secretariat of WENRA. According to the mandate, the Task Force should bring together nuclear safety and nuclear security experts and identify existing interfaces between nuclear safety and nuclear security for nuclear power plants (NPP) in operation as well as potential issues of a safety-security-interface.
Safety Security Interfaces  
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- During two meetings in Spring and Fall 2018 the Task Force prepared draft document, WENRA Guidance/Report „Interfaces between Nuclear Safety and Nuclear Security“.

- The expert group identified following Safety Security Interfaces:
  - Aim of Nuclear Safety and Nuclear Security Measures
  - Communication, Transparency and Confidentiality
  - Independent Assurance and Oversight Functions
  - Integrated Management System
  - Organizational Culture
Safety Security Interfaces
(continued)

- Staff Qualification and Training
- Site Area
- Requirements for Safety and Security Measures (Existing Reactors)
- Systems, Structures and Components
- Requirements for Safety and Security related IT-Systems
- Feedback from Operating Experience and Plant Modification
- Zones, Access and Escape Routes
- On-site Emergency Response
- Regulatory Framework
Communication, Transparency and Confidentiality

- This interface is most difficult one, because transparency and confidentiality are in direct contradiction.
- According to Act 211/2000, Coll. on free access to information and international agreements, e. g. Aarhus convention, the state bodies are obliged to allow access to technical documentation, e. g. NPP preliminary safety report.
- This document contains detailed description of design, layout, location and device parameters and, most important the safety analysis of operational events.
Communication, Transparency and Confidentiality
(continued)

- During the construction of NPP Mochovce, units 3 and 4, the regulatory authority was requested to make available preliminary safety report to public, especially to environmental organizations and to the opponents of nuclear energy from foreign countries.

- The regulatory body considered the disclosure of this information as a threat to nuclear security and therefore did not disclose it. Only censored version of preliminary safety report, not containing sensitive information, was made available.

- The censorship was done following § 3 article 16 and 17 of Atomic Act.
The regulatory body has been sued and a trial is underway to make the uncensored report available.

On one hand the state is obliged to make available to public the information relevant to nuclear safety, on the other hand the state is obliged to protect nuclear materials and nuclear facilities. These two requirements are in conflict.

Additionally to this, the regulatory body spent lots of effort, manpower and time in removing sensitive information from publicated document, instead of doing its job, which is the state supervision on nuclear safety and nuclear security.
Another negative consequence of the disclosure of sensitive information from the safety report is a significant increase in the requirements for the physical protection of nuclear materials and nuclear facilities, resulting in an increase in the cost of physical protection.

One way to solve this problem is to make the relevant parts of the safety report confidential.
Organizational Culture

- Organizational culture of a nuclear installation consists, among others, also of nuclear safety culture and nuclear security culture. In Slovak language we do have one word for English words safety/security.

- In Atomic Act 541/2004 Coll., paragraph 2 letter x describes the nuclear safety/security culture as attitudes and behavior of the permit holder and its staff, approved by the statutory body and understood and supported by all employees who will prioritize nuclear safety/security above all others.

- Paragraph 23 section 2 letter c imposes to permit holder an obligation to improve nuclear safety/security at the highest achievable level in the application of the safety/security culture.
Since 2004 the permit holder regularly performs, according to the requirements of regulatory body, nuclear safety culture self-assessment.

The gradual change in the nuclear safety/security perception and support by the IAEA allowed the implementation of nuclear security culture self-assessment in 2017, as a separate part of organizational culture.
Organizational Culture
(continued)

- The differentiation of nuclear safety and nuclear security culture assessment has been an important progress in effort to improve nuclear security culture as it was considered as a part of nuclear safety culture, or at all.
- This differentiation gives to operator, as well as to regulatory body, the opportunity to highlight the importance of independent perception of nuclear security as an important part of organizational culture.
- The new perception of the importance of the nuclear security culture creates a synergistic effect in interaction with the nuclear safety culture with a positive impact on the overall organizational culture.
Conclusion

- As we could see, the interfaces between nuclear safety and nuclear security may be beneficial, however they may also cause lot of difficulties, because they can be contradictory.
- So we think it is necessary for the future to focus on strengthening those interfaces that bring positive synergy effects, but also those that conflict with each other and thus jeopardize nuclear safety and/or nuclear security.
ANY QUESTIONS
DO YOU HAVE?