Slovak nuclear legislation towards harmonization of nuclear safety approaches

Marta Žiaková

Chairperson

Where we are

ÚJD SR

Nuclear Installations in Slovakia

▶ **Two sites:**

   ◆ **Bohunice site**

   ◆ **Mochovce site**

BOHUNICE SITE

		commissioned	licence holder
NPP V-1 (EBO1,2)	WWER 440/230	1978, 1980	JAVYS, a.s.
NPP V-2 (EBO3,4)	WWER 440/213	1984, 1985	SE, a.s.
ISFS	pool type	1987	JAVYS, a.s.
NPP A-1	HWGCR	decommissioning	JAVYS, a.s.

ÚJD SR

BOHUNICE SITE
Waste Treatment Facilities, JAVYS, a.s.

- ► cementation and bituminisation of liquid ra-concentrates, sludge and ion exchange resins

- ► solidification of sludge into SiAl matrix

- ► solidification of ash into paraffin matrix

- ► vitrification of specific NPP A-1 decommissioning waste

- ► processing of disused air filters

- ► reduction of solid waste by incineration and super compaction

- ► grouting of waste into FRC containers - as final waste package

- ► super compaction, fragmentation and recycling of metal waste

- ► fragmentation and decontamination of materials for release

MOCHOVCE SITE

		commissioned	licence holder
NPP EMO1,2	WWER 440/213	1998, 1999	SE, a.s.
Ra-waste Repository	near surface	1999	JAVYS, a.s.
LRAW Treatment Centre		2009	JAVYS, a.s.
NPP EMO3,4	under construction		SE, a.s

Driving forces for harmonization

► **Main activities during the last period:**

   1. **RHWG WENRA**

   2. **WGWD WENRA**

   3. **EC Directive on Nuclear Safety**

► **Slovakia joined WENRA in 2003, i.e. did not participate on the methodology development (handicapped situation).**

ÚJD SR

► **Results of the reactor harmonization benchmarking– regulatory side:**

- ◆ **208 RLs assessed as A**

- ◆ **1 RL assessed as B**

- ◆ **85 RLs assessed as C (mainly severe accidents provisions)**

► **Slovak legislation turned out to be already well harmonized and up to date.**

► **Nevertheless UJD fully supported the idea of 100% harmonization and commited to harmonize all of the remaining RLs.**

► **Implementation requires amendment of the Atomic act as well as several regulations.**

ÚJD SR

▶ **Results of the waste and decommissioning benchmarking – regulatory side:**

- ◆ **198 RLs assessed as A**

- ◆ **0 RLs assessed as B**

- ◆ **37 RLs assessed as C**

▶ **Implementation requires amendment of the Atomic act as well as several regulations.**

WENRA implementation

▶ **Implementation side turned out to be well harmonized thanks to large modernization project ongoing 2000 – 2008.**

▶ **The rest of the requirements are being implemented as a result of performed complex periodic safety reviews of all of the nuclear facilities in Slovakia (2006 – 2011).**

▶ **The most demanding requirements are related to severe accident management and are realized on both operating NPPs:**

- ◆ **Bohunice V2: 2008 – 2013**
- ◆ **Mochovce 1,2: 2011 – 2015**

▶ **The scope includes:**

- ◆ **RPV flooding (in-core retention strategy)**
- ◆ **Primary circuit depressurization**
- ◆ **Containment vacuum breakers**
- ◆ **Hydrogen management**
- ◆ **External power sources**
- ◆ **...**

EU Directive on Nuclear Safety

▶ **Works on amendment of the Atomic act and related regulations due to WENRA activities were interrupted by the transposition of EU directive 2009/71/ Euratom establishing a Community framework for the nuclear safety of nuclear installation (term- 22nd July 2011)**

▶ **All efforts focused to transpose on time including all WENRA requirements.**

▶ **Transposition requires amendment of the Atomic act.**

Amended nuclear legislation

► Amendment of the Atomic act - state of the art

- ◆ September – October 2010: Official Interdepartmental notification and comments procedure
- ◆ 25th January 2011: the Legislative Council of the Government has approved the amendment.
- ◆ 2nd February – 2ndMay: EU notification procedure (article 30-33 Euratom Treaty, Dir. 98/34/EC) – no. 2011/0044/SK
  - ● EC sent its opinion on the Amendment that has without any objections under Article 33 of the Euratom Treaty
  - ● According to Directive 98/34/EC no comments from the EC or the Member States were sent by 2nd May 2011
- ◆ 11th May 2011: the Government has approved the amendment
- ◆ 19th May 2011: Amendment was submitted to the National Council of the Slovak Republic
- ◆ September 2011: Anticipated approval of the Amendment by the National Council of the Slovak Republic

► Amendment of the regulations

- ◆ All of the revisions are drafted and wait for the amended Atomic act to be published.
- ◆ New regulations expected to be published before the end of 2011.

Challenges during harmonization process

▶ **Revisions of legal documents implementing all WENRA requirements were finished in 2010, but:**

- ◆ **elections to national parliament** in Slovak republic,
- ◆ **impossible to finish the whole legal process.**

▶ **Revisions of legal documents were effected by a new necessity – transposition of the EU directive on nuclear safety (EU Directive 2009/71/Euratom)**

▶ **Difficulties to transpose some of the terms from the EU Directive**

- ◆ *„regulatory authority is given the legal powers and human and financial resources necessary to fulfil its obligations...“* - legal system in Slovakia requires **explicit quantification** (no implicit terms).
- ◆ **Other difficult terms: if appropriate, ...**

Response to the Fukushima accident

▶ **Slovakia is actively involved in all relevant international activities dealing with experience feedback from the Fukushima accident.**

▶ **UJD expressed its commitment to implement all relevant internationally recognised measures as a feedback from the accident when they are available (IAEA standards, results of the stress tests, ...)**

▶ **Preliminary assessment showed that at least the following aspects are necessary to be further developed:**

  ◆ **multiple units issues (especially for the severe accident conditions),**

  ◆ **long lasting station black-out.**

▶ **It is still to be determined whether these aspects require modification of existing legislation or the level of safety guides is satisfactory.**

Thank you for your attention