

Activities of WENRA-WGWD

**IAEA – ASN Technical Meeting on the Establishment of
a Radioactive Waste Management Organisation**

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What is WENRA ?

The WENRA methodology

The partners of WENRA

The WENRA working group on reactor harmonisation

The WENRA working group on waste and decommissioning

Selected results/topics of WGWD

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- 2009 was the 10th anniversary of WENRA
- WENRA: regulators of all European nuclear countries
i.e. countries with operating or shut down NPPs
- basically only EU countries plus Switzerland
- goals of WENRA:
 - exchange of inspection experience
 - support new members of EU
 - establish common safety reference levels in order to
 - harmonize national legal systems
- basis: self commitment of WENRA members

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- methodology of WENRA:
 - establish safety reference levels based on the following sources:
IAEA requirements,
other relevant international publications (e.g. NEA),
individual contributions from members (expert knowledge)
 - benchmarking of national legal systems and implementation to the SRLs
 - prepare national action plans (NAPs) to address identified deficiencies
 - verify the accomplishment of NAPs
- openness and transparency
 - frequent discussions with major stakeholders
IAEA, NEA, EC, ENISS
- cooperation with other bodies such as EPS-group

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- RHWG (reactor harmonization working group)
 - establish safety reference levels for selected topical areas of interest
 - specific requirements for new reactor safety
 - long term operation of older reactors
 - inspection practice (focusing specifically on the new built)
 - research reactors

blue items: probably in another / new working group

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- WGWD (working group on waste and decommissioning)
 - establish safety reference levels for waste and spent fuel storage (Ver.2)
 - establish safety reference levels for decommissioning (Ver.1)
 - establish safety reference levels for disposal (Ver.1 expected in 2012)
 - establish safety reference levels for waste conditioning
 - establish safety reference levels for waste generation and pre-treatment

green items: not yet official tasks assigned

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- WGWD prepares comprehensive reports covering all aspects of nuclear safety in a given area
- SRLs are primarily addressing the licensee/operator
- implement the idea of a graded approach
- few SRLs also address responsibilities of the authorities
- SRLs are structures similarly as far as possible in all WGWD reports according to safety areas and safety issues
- The final goal is to cover all types of utilities and practices, which are integral parts of any comprehensive national waste management system

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Storage	Decommissioning	Disposal
Safety management	Safety management	Safety management
Design	Decommissioning strategy and planning	Safety requirements for the repository incl. all phases of facility
Operation	Conduct of decommissioning	
		Waste acceptance for final disposal
Safety verification	Safety verification	Safety verification

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- deficiencies of national legal systems are identified during the benchmarking exercises
- countries carry out corrective measures NAPs such as
 - adoption of national legal systems (acts, ordinances)
 - issue new or modify existing regulatory guides
 - declare existing technical regulations as mandatory
 - adapt regulatory practices
- WGWD approves such measures in a follow up panel benchmarking

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- Utilities face harmonized and appropriate requirements in any WENRA member country
- Fast corrective actions are possible because they are carried out on a purely national level
- Inclusion of day to day regulatory experience
- Build-up of a strong personal network on an international basis
- Specifically for WGWD: All aspects of a national waste management system are covered and treated equally

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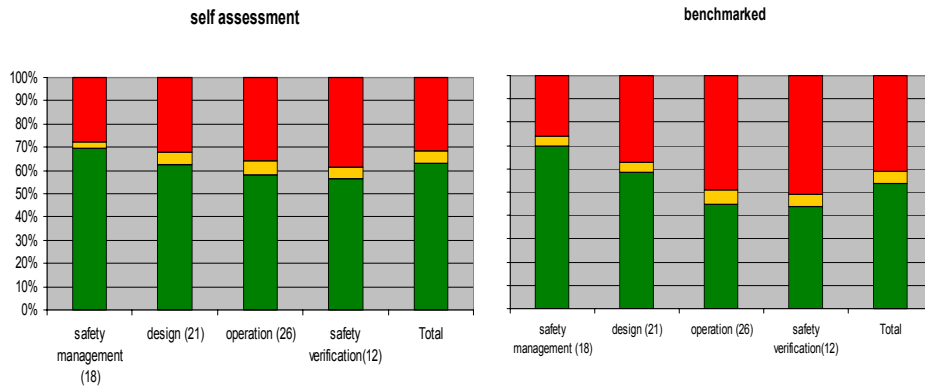
The end

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- Structure of SRLs:
 - * Safety management
 - * Design
 - * Operation
 - * Safety verification
- Specific safety areas and issues developed by WGWD:
 - Record keeping
 - Handling and retrieval requirements
 - Reserve storage capacity
 - Specific contingency plans
 - Requirements for acceptance of packages and SF elements

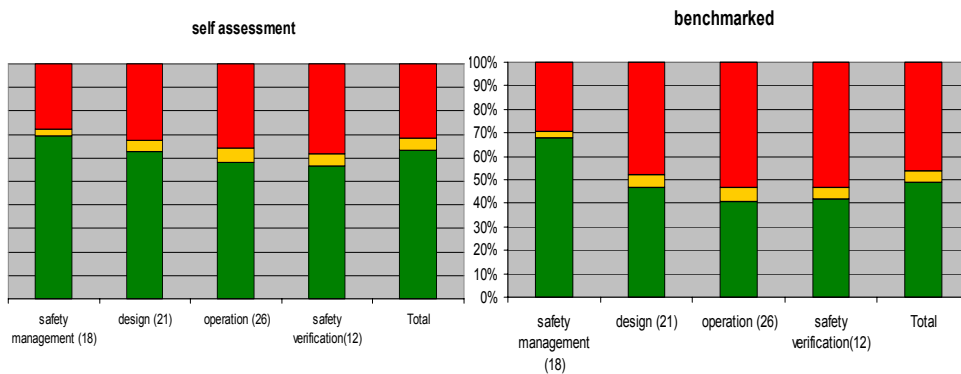
12

- Results (storage, spent fuel, legal): 17 % changes



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- Results (storage, waste, legal): 20 % changes



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- Results 1

- Some SRLs have to be rechecked (more information requested)
- Prominent directions of change were B ► C and A ► C
- Lowest A percentage in the area *safety verification*
- Significant number of changes (15 – 20 %)
- No significant difference between waste and spent fuel

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- Results 2 (problematic safety reference levels)

- There is a certain number of reference levels (“shopping list”) which are extremely difficult to benchmark; examples are: *safety case, emergency plan, periodic safety review*
- A task group has been formed to address the subject
- In comparing the situation in 17 countries several changes of SRLs have been proposed, discussed and recorded

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- Results 3 (problematic safety reference levels, example S-43)

- S-43:** The emergency plan of the licensee shall provide for arrangements to address the following:
1. The designation of persons who will be responsible for directing on-site activities and for ensuring liaison with off-site organizations;
 2. The requirements for personnel training;
 3. The list of likely accidents, including combinations of nuclear and non-nuclear hazards as necessary. If relevant, the description of possible severe accidents and their consequences ;
 4. The conditions and criteria under which an emergency shall be declared, a list of job titles and/or functions of persons empowered to declare it, and a description of suitable means for alerting response personnel and public authorities;
 5. The arrangements for assessment of the radiological conditions on and off the site (water, vegetation, soil, air sampling);
 6. Provisions for minimizing the exposure of persons to ionising radiation and for ensuring medical treatment of casualties;
 7. Assessment of the state of the facility and the actions to be taken on the site to limit the extent of radioactive release and spread of contamination;
 8. The chain of command and communication, including a description of related facilities and procedures. There shall be a means of informing all persons on the site of the actions to be taken in the event of an emergency;
 9. An inventory of the emergency equipment to be kept in readiness at specified locations;
 10. The actions to be taken by persons and organizations involved in the implementation of the plan;
 11. Provisions for declaring the termination of an emergency.

New proposal

- S-43a Emergency preparedness
- S-43b Personal and organisational responsibilities and provisions
- S-43c Assessment of impacts of incidents
- S-43d Mitigation of adverse consequences

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- Results 4 (implementation)

- Variety of national approaches: all / representative / single facilities
- Results strongly dependant on approach
- Results in principle in accordance with legal benchmarking
- Some problems with the degree of homework
- General feeling: little added value, if any

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ToR for disposal report

- Previous proposal (which was discarded by WENRA, spring 07)
- WGWD-composition needs only slight modification
- Original plan: work on LLW/ILW „with the option of later extension to HLW“
- Draft was submitted to WENRA in Oct. 2008

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Questions:

- Where should we start?
 - After a site has been selected!
- What shall we cover?
 - Definitely LLW and ILW. Presently WGWD-position is to cover also HLW if safeguards and security issues can be neglected!
- Where shall we stop?
 - Still open if there will be a certain time limit for the post closure phase!

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Slide 19

AŽ1 Here should be probably 2010?
Alena Zavažanová, 2010-05-31

Preliminary list of safety areas:

- ***Financial assurances for waste disposal (questionable)***
- **Licensee's organisation and safety policy**
- **Safety requirements for the repository**
- **Acceptance criteria for waste and waste packages**
- **Operation of disposal facilities**
- **Closure requirements**
- **Safety verification**

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Identified relevant documents (general):

- **GSG-1 Classification of Radioactive Waste (2009)**
- **Fundamental Safety Principles (SF-1, 2006)**
- **International basic safety standards for protection against ionizing radiation and for the safety of radiation sources. (SS 115, 1996, draft DS 379 under revision)**
- **GSR Part 5: Predisposal Management of Radioactive Waste (2009)**
- **The Management System for the Processing, Handling and Storage of Radioactive Waste (GS-G-3.3, 2008)**

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Identified relevant documents (Disposal):

- Disposal of Radioactive Waste (DS 354, 2007)
- Geological disposal of radioactive waste (WS-R-4, 2006)
- Geological Disposal of Radioactive Waste (DS 334, 2007 guide)
- Siting of Geological Disposal Facilities (SS 111-G-4.1, 1994)
- Near Surface Disposal of Radioactive Waste (WS-R-1, 1999)
- Siting of Near Surface Disposal Facilities. (SS 111-G-3.1, 1994)
- The Management System for the Disposal of Radioactive Waste (GS-G-3.4, 2008)
- Near Surface Disposal of Radioactive Waste (DS 356)
- Borehole Facilities for the Disposal of Radioactive Waste (DS 335, 2006)
- Safety Assessment for Radioactive Waste Disposal Facilities (DS 355, 2006)

- The Handling of Timescales in Assessing Post-closure Safety (2004)
- Post-closure Safety Case for Geological Repositories (2004)
- Regulating the Long-term Safety of Geological Disposal (2007)

- EPG- documents.....

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- Scope of SRLs - address mainly the radiological hazards resulting from the activities associated with the decommissioning of facilities, primarily with decommissioning after a planned shutdown
- Structure of SRLs:
 - * Safety management
 - * Decommissioning strategy and planning
 - * Conduct of decommissioning
 - * Safety verification

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- Specific safety areas and issues developed by WGWD:

Decommissioning strategy and planning

- Responsibilities
- Record keeping
- Waste management
- Control of work activities
- Care-and-maintenance activities
- License termination conditions
- Final decommissioning report

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- Results (decommissioning, legal): 15 % changes



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- Results 1

- Some SRLs have to be rechecked
- Prominent directions of change were B ► C and A ► C
- Lowest A percentage in the area *safety verification*
- Significant number of changes (15 %)

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- Results 2 (problematic safety reference levels)

- There is a certain number of reference levels ("shopping list") which are extremely difficult to benchmark; examples are:
safety case, emergency plan, periodic safety review
solution: see presentation on storage-SRLs
- Clarification of definitions necessary: decommissioning plan, safety case, safety assessment, safety report, safety analysis report
solution: next slide)
- In comparing the situation in 17 countries several changes of SRLs have been proposed, discussed and recorded

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