

WENRA

Current activities of WENRA

4th GNSSN Steering Committee Meeting
Vienna, 30 June – 2 July 2014
Dieter Müller-Ecker (GRS mbH – Germany)
Head of WENRA Technical Secretariat

Contents

4th GNSSN Steering Committee Meeting Vienna, 30 June – 2 July 2014

- 01 WENRA
- 02 WENRA WGWD
- 03 WENRA RHWG
- 04 WENRA Recommendation
- 05 Summary

01

WENRA

01 WENRA

Basic facts

- Association of the Heads of nuclear regulatory authorities of the EU countries with NPP and Switzerland
- Original Terms of Reference signed on 4 February 1999 (10 countries)
 - Revised on 14 March 2003 (17 countries)
 - Revised on 26 March 2010
- Independent club of regulators
- European center of competence for Nuclear Safety
- Chairman Hans Wanner / ENSI

www.wenra.org

01 WENRA

Policy statement

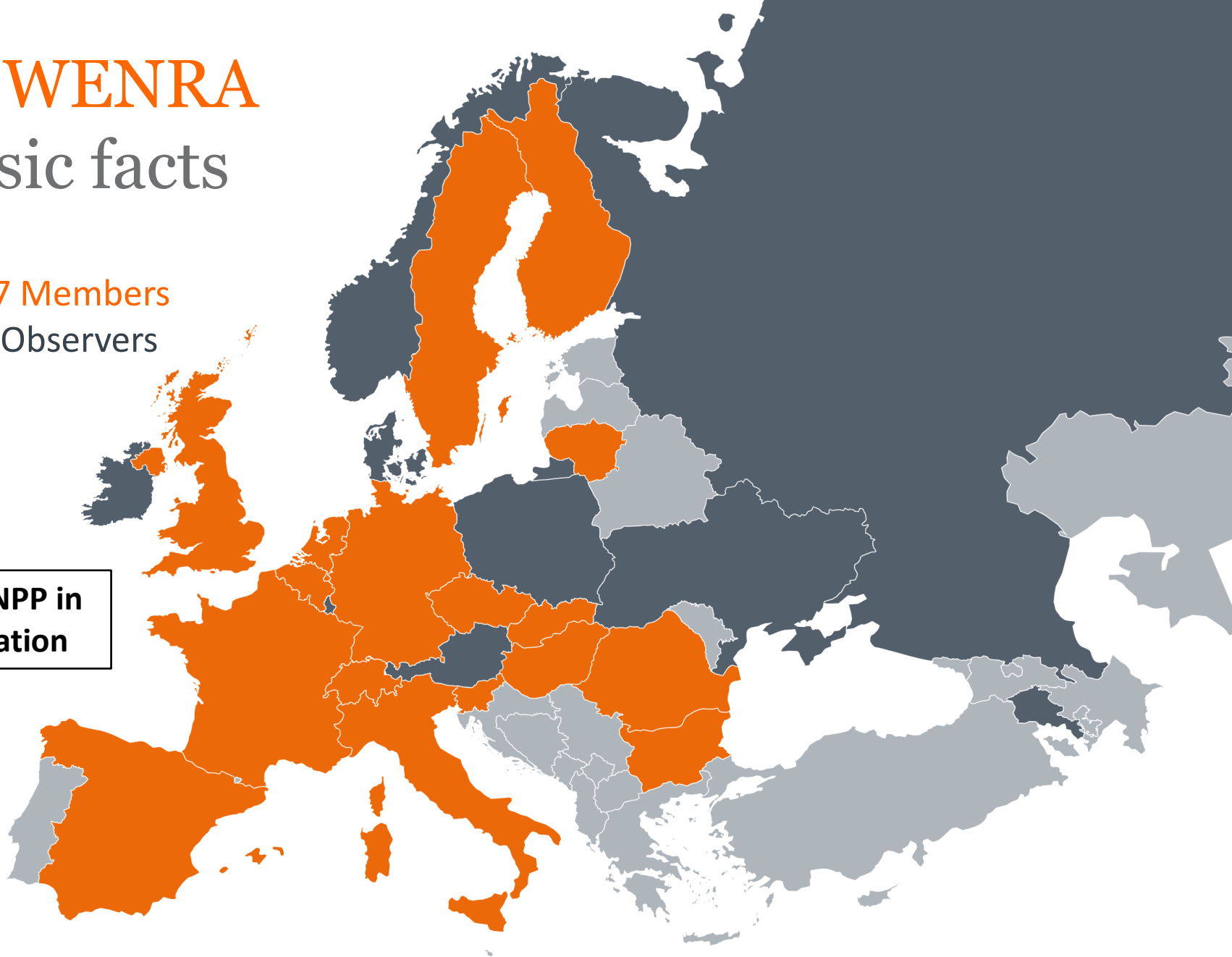
- “We the heads of the national Nuclear Safety Authorities, members of WENRA commit ourselves to continuous improvement of nuclear safety in our respective countries.”
- “Nuclear safety and radiation protection are based on the principle of the prime responsibility of the operators. The role of national regulators is to ensure that this responsibility is fully secured in compliance with the regulatory requirements.”
- “In order to work together, we created the Western European Nuclear Regulators’ Association (WENRA)” ...

01 WENRA

Basic facts

- 17 Members
- 9 Observers

137 NPP in operation



01 WENRA

Main Objectives

- To **develop a common approach** to selected nuclear safety and radiation protection issues and their regulation, in particular within the European Union
- To provide the European Union Institutes with an **independent capability** to examine nuclear safety and its regulation in applicant countries
- To **serve as a network** of chief nuclear safety regulators exchanging experience and discussing significant safety issues
- WENRA plenary meeting 2/yr

01 WENRA

Technical Working Groups

Technical Working Groups have been established to **harmonize safety approaches** and continuously improve nuclear safety:

RHWG Reactor Harmonization Working Group

WGWD Working Group on Waste and Decommissioning

Ad-hoc working groups

Members

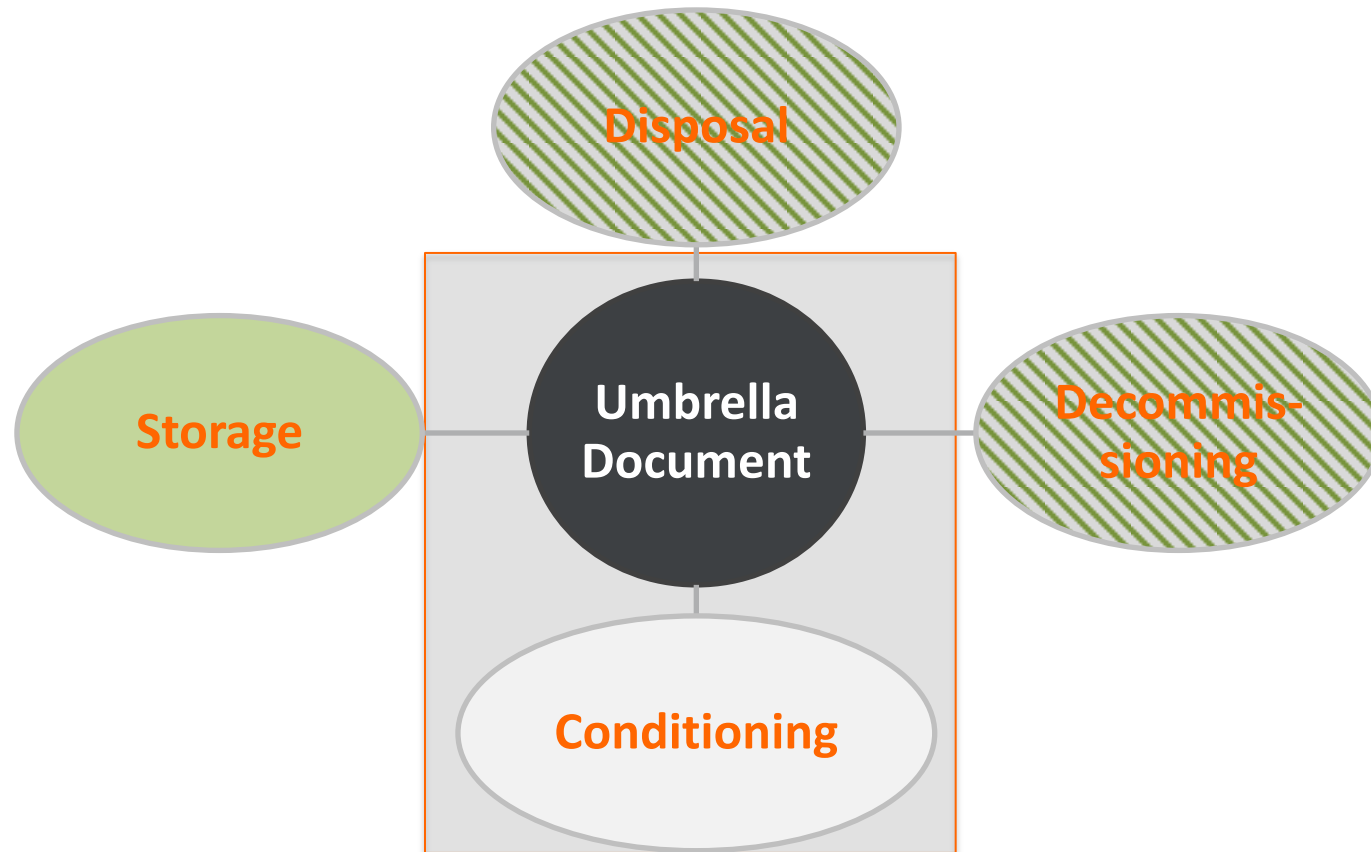
- Senior experts from all WENRA countries
- Meetings 3/yr and subgroups

02

WENRA Working Group on Waste and Decommissioning WGWD

02 WENRA WGWD

WGWD activities

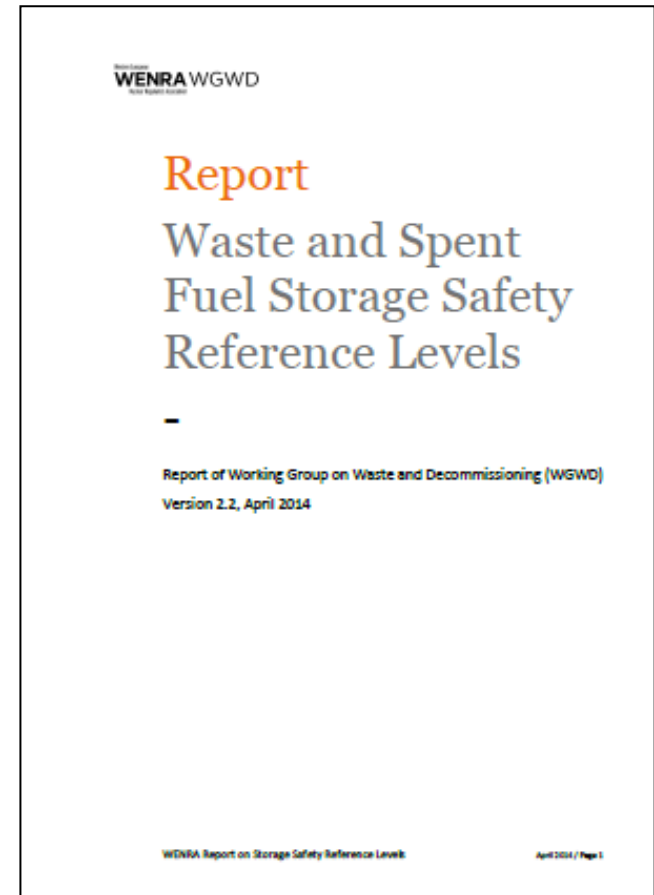


02 WENRA WGWD

WGWD activities

Harmonization of requirements in the field of radioactive waste and spent fuel storage and decommissioning

Waste and Spent Fuel Storage
Report on implementation of Safety Reference Levels published in April 2014
(www.wenra.org)



02 WENRA WGWD

WGWD activities

Decommissioning and Disposal

Reports on implementation of Safety Reference Level will be finalized in 2014

Report on Conditioning and Umbrella Document

Future work

03

WENRA Reactor Harmonization Working Group RHWG

03 WENRA RHWG

RHWG activities

Complete set of 284 Reactor Safety Reference Levels (SRL)
published in 2006

Revised set of 295 SRL based on stakeholder comments
published in 2008

Implementation >80% in 14 countries, 100% in 8 countries

Revision of SRL based on lessons from Fukushima started in
2012

03 WENRA RHWG

RHWG activities

- After Fukushima review of the SRLs with regard to the lessons learnt from the accident
- Establishment of ad-hoc Working Groups

New Ad-hoc Working Groups (post Fukushima)

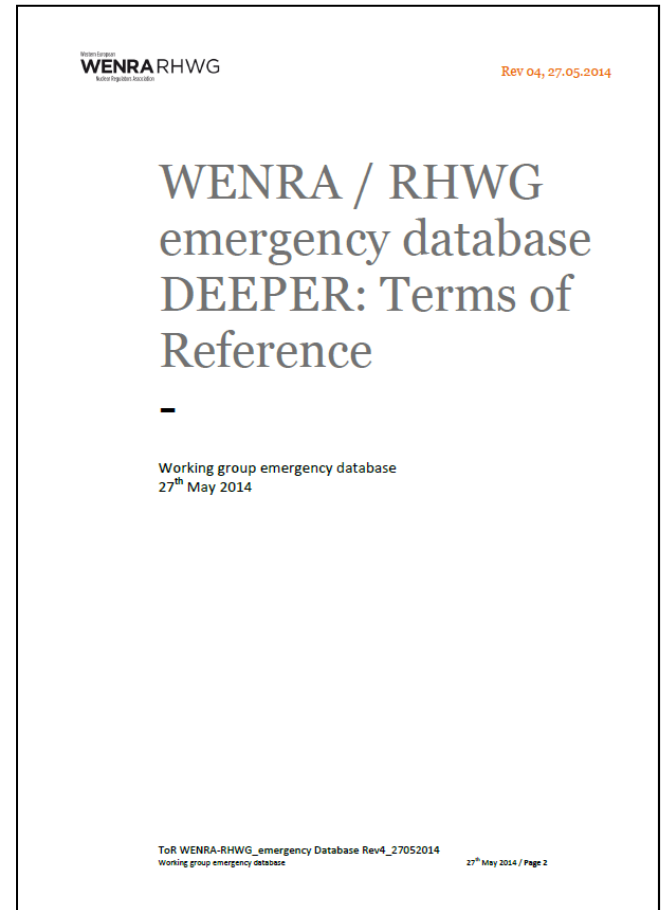
- Mutual assistance → Mandate fulfilled in 2013
 - Periodic safety review → Mandate fulfilled in 2013
 - Containment integrity
 - Accident management
 - Natural hazards
- } Review of SRL completed in 2014
Guidelines in preparation

03 WENRA RHWG

Mutual assistance

Actions taken:

- Creation of Emergency Database DEEPER
 - Development of Database by WG
 - Terms of Reference agreed
 - European reactor designs
 - Test phase ongoing
- Several recommendations on exchange and coordination of technical and radiological assessments → HERCA



03 WENRA RHWG

Periodic Safety Review

WENRA Position Paper
March 2013
see www.wenra.org

Western European
WENRARHWG
Nuclear Regulators Association

Position paper
on Periodic Safety Re-
views (PSRs) taking into
account the lessons learnt
from the TEPCO
Fukushima Dai-ichi NPP
accident

—
Study by

WENRA Reactor Harmonization Working Group

March 2013

03 WENRA RHWG

Review and Revision of SRL

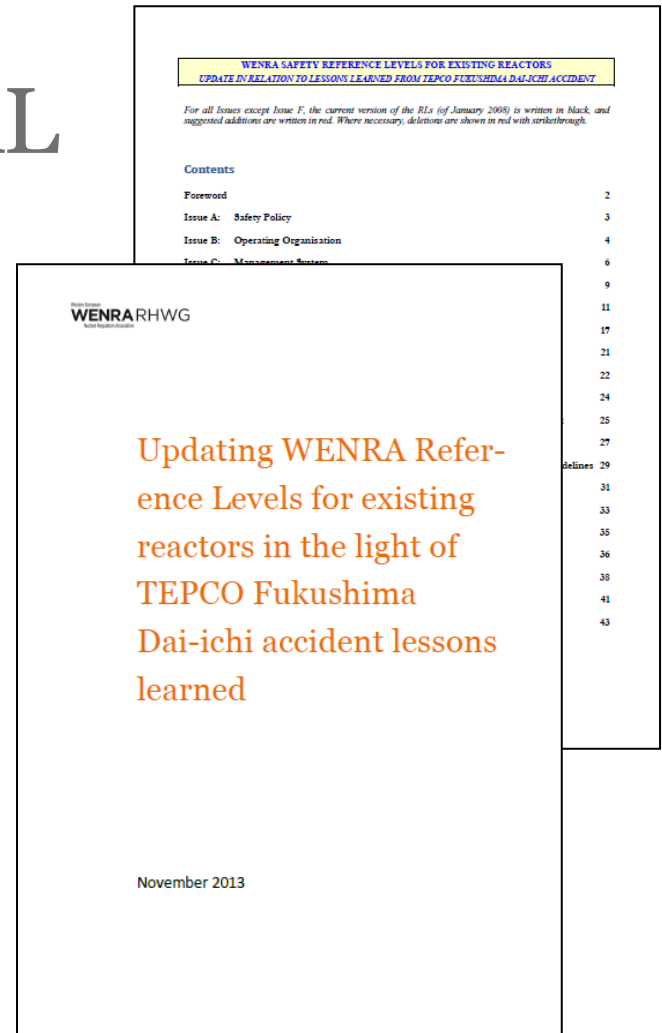
- Review took into account explicitly:
 - principle of continuous improvement
 - safety culture
 - safety of spent fuel pools
 - sites with multiple reactors
 - conditions at the site after an accident
 - need for independent and diverse heat removal means
 - beyond design basis conditions
- A new “issue” dedicated to natural hazards has been established

WENRA SAFETY REFERENCE LEVELS FOR EXISTING REACTORS UPDATE IN RELATION TO LESSONS LEARNED FROM TEPCO FUKUSHIMA DAI-ICHI ACCIDENT	
<i>For all Issues except Issue F, the current version of the RLs (of January 2008) is written in black, and suggested additions are written in red. Where necessary, deletions are shown in red with strikethrough.</i>	
Contents	
Foreword	2
Issue A: Safety Policy	3
Issue B: Operating Organisation	4
Issue C: Management System	6
Issue D: Training and Authorization of NPP Staff (Jobs with Safety Importance)	9
Issue E: Design Basis Envelope for Existing Reactors	11
Issue F: Design Extension of Existing Reactors	17
Issue G: Safety Classification of Structures, Systems and Components	21
Issue H: Operational Limits and Conditions	22
Issue I: Ageing Management	24
Issue J: System for Investigation of Events and Operational Experience Feedback	25
Issue K: Maintenance, In-Service Inspection and Functional Testing	27
Issue LM: Emergency Operating Procedures and Severe Accident Management Guidelines	29
Issue N: Contents and Updating of Safety Analysis Report (SAR)	31
Issue O: Probabilistic Safety Analysis (PSA)	33
Issue P: Periodic Safety Review (PSR)	35
Issue Q: Plant Modifications	36
Issue R: On-site Emergency Preparedness	38
Issue S: Protection against Internal Fires	41
Issue T: Natural Hazards	43

03 WENRA RHWG

Review and Revision of SRL

- SRL and accompanying report was put for **stakeholder comments** on WENRA web-page for three months
 - all important European stakeholders informed
 - approx. 100 comments
 - all comments have been considered in the review
 - approval of SRL is ongoing
- Publishing is foreseen on a 15-years WENRA side-event during General Conference



03 WENRA RHWG

342 Safety Reference Levels

Safety Management	A	Safety Policy
	B	Operating Organization
	C	Management System
	D	Training and Authorization of NPP staff
Design	E	Design Basis Envelope for Existing Reactors
	F	Design Extension of Existing Reactors
	G	Safety Classification of Structures, Systems and Components
Operation	H	Operational Limits and Conditions
	I	Ageing Management
	J	System for Investigation of Events and Operational Experience Feedback
	K	Maintenance, In-service inspection and Functional Testing
	LM	Emergency Operating Procedures and Severe Accident Management Guidelines
Safety verification	N	Contents and updating of Safety Analysis Report
	O	Probabilistic Safety Analysis
	P	Periodic Safety Reviews
	Q	Plant Modifications
Emergency preparedness	R	On-site Emergency Preparedness
	S	Protection against Internal Fires
Design	T	Natural hazards (new issue after Fukushima)

03 WENRA RHWG

Review and Revision of SRL

Guidance Documents (in preparation):

- Guidance document on natural hazards (Issue T)
 - Head document; explaining the understanding of the SRLs
 - Particular appendices for:
 - ❖ Earthquake
 - ❖ Flooding
 - ❖ Extreme weather conditions
- Guidance document on design extension (Issue F)
 - Purpose is to provide improved understanding of the intent of the Safety Reference Levels of Issue F for consistent interpretation
 - Concept of “Design Extension Conditions” (DEC) is used
 - DEC-B involving a severe accident or
DEC-A not involving a severe accident

04

WENRA Recommendation on flaw indications

04 WENRA Recommendation

2-step verification of materials quality and structural integrity of reactor pressure vessels:

1. Comprehensive review of RPV manufacturing and inspection records
 2. Examination of the base material of the vessels
- Evaluation of national activities is ongoing
 - Until now no further indications

www.wenra.org



05

Summary

05 Summary

- Harmonization in the field of waste and decommissioning is ongoing
- Actions taken by WENRA due to lessons from Fukushima
 - Review and revision of SRL, publishing in autumn
 - New guidance documents on natural hazards and design extensions
 - Database DEEPER
- WENRA recommendation in connection with flaw indications in Belgian reactors
- Overall review of SRL will be started including a focus on requirements for new builds

Thank you

WENRA

Dieter Müller-Ecker (GRS mbH – Germany)

Head of WENRA Technical Secretariat

Dieter.Mueller-Ecker@grs.de

www.wenra.org