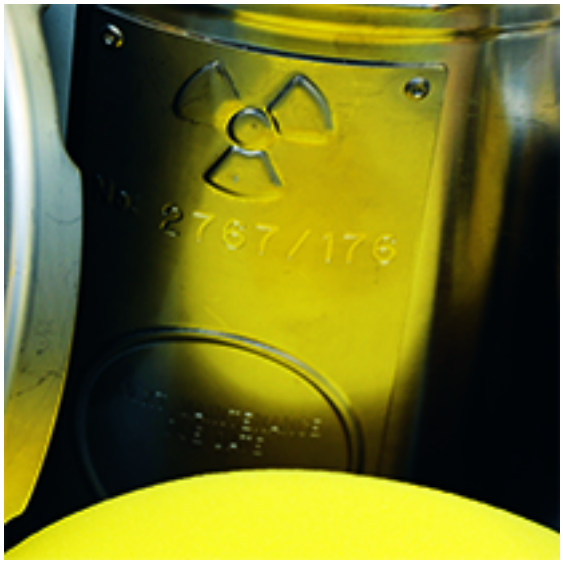
International Conference on the Safety of Radioactive Waste Management (CN-242)



Monday, 21 November 2016 - Friday, 25 November 2016

Scientific Programme

The conference will consist of an opening session with a panel discussion, topical sessions with keynote addresses and oral contributions, and poster sessions. The conference will conclude with a panel session addressing key points from the week's discussions for consideration by the IAEA Secretariat.

National Policy, Strategy and Framework for Radioactive Waste Management

• National framework, policy and strategy
• Role & Responsibilities of the different interested parties in the different steps of radioactive waste management (e.g. regulator, operator, civil society, etc.)
• Confidence building in decision making process and science and technology
• Interactions/relations between Regulator and Operator during the pre-licensing process & licensing process
• National approaches for building competences for radioactive waste management (incl. HR component, Knowledge transfer)
• Role of International Cooperation for national RWM programmes:
International collaborative R&D;
International guidance and legal instruments;
Roles and timing of Peer Reviews
• National approaches for the handling of radiological and non-radiological requirements
• Interface of safety, security and safeguards within radioactive waste management
• Funding mechanisms for radioactive waste management programmes

Predisposal (Waste processing)

• Good practices – minimization; segregation; characterization; classification; conditioning, etc.
• Innovative technologies – conditioning, characterisation, etc.
• Clearance levels and application of clearance levels
• Challenges in management of legacy and special wastes (e.g. Graphite, Beryllium), and mixed hazard waste
• Approaches and solutions for treatment and conditioning without a defined end-point – options and interdependences of different waste management steps to be considered
• Regulatory approach for pre-disposal oversight: requirements, compliance control, review and assessment, inspections, enforcement actions

Predisposal (Storage of Radioactive Waste and Spent Nuclear Fuel)

• Developing the safety case for storage
• Examples of good practice, including monitoring, inspection, knowledge management, etc.
• Regulatory aspects: expectations for demonstration of safety; inspections; decisions and actions upon non-compliance
• Challenges when storage time extended longer than planned: waste form evolution/degradation; relicensing; ageing management; regulatory considerations for storage time extensions
• Technological and safety aspects of multi-purpose casks (storage/transport/disposal)

Disposal of Very Low Level Waste and Low Level Waste

• Developing the safety case for VLLW and LLW disposal
• Specific safety aspects and technological solutions for disposal of VLLW and LLW containing long-lived radionuclides e.g. uranium, radium bearing waste, etc.
• Regulatory aspects: expectations for demonstration of safety; inspections; decisions and actions upon non-compliance
• Monitoring and institutional control
• Consideration of human intrusion in the safety case
• The site selection process and screening criteria
• Challenges of adapting overseas concepts and designing for local conditions
• Lessons learned from operation of facilities
• Approaches to manage existing facilities which do not comply with current safety standards (e.g. historical facilities)
• Experience with use of International guidance

Disposal of Intermediate Level Waste

• Developing the safety case for ILW disposal
• Specific safety aspects and technological solutions for disposal of ILW (e.g. gas generation, optimization of depth of disposal, timeframes for safety assessment, long-lived radionuclides)
• Regulatory aspects: expectations for demonstration of safety; inspections; decisions and actions upon non-compliance
• Monitoring and institutional control
• Consideration of human intrusion in the safety case
• The site selection process and screening criteria
• Challenges of adapting overseas concepts and designing for local conditions
• Lessons learned from operation of facilities
• Experience with use of International guidance

Disposal of Disused Sealed Radioactive Sources

• Developing the safety case for the disposal of DSRS
• Specific safety aspects and technological solutions for the disposal of DSRS
• Regulatory aspects: expectations for demonstration of safety; inspections; decisions and actions upon non-compliance
• Dedicated disposal solution and challenges in their implementation

Disposal of High Level Waste, Including Spent Nuclear Fuel Declared as Waste

• Experience in developing and reviewing safety cases for the disposal of high level radioactive waste (operational and long-term safety)
• Experience from siting process including the role of and interactions between the different interested parties (implementer, regulator, government, public, etc.)
• Specific safety aspects and technological solutions for disposal of HLW (e.g. monitoring and role to support decision making, reversibility/retrievability, scenario development, knowledge management and memory keeping, etc.)

• Flexibility of geological disposal facilities to accommodate evolution of inventories and characteristics of waste
• Experience and challenges for operators and regulators in moving from development to the construction and operation of the disposal facility (industrialization, regulatory authorization, etc.)
• Using the safety case for prioritization of research and development
• Challenges for Member States contemplating shared disposal facilities (e.g. responsibilities, decision-making, public involvement and acceptance, etc.)
• Experience with use of International guidance

Post-Accident Waste Management: Lessons Learned and Preparedness

• Experience of post-accident waste management (e.g. management of large amounts of waste (generally low activity) or damaged fuel, characterization of waste, etc.) including:
Strategies for identifying and developing storage sites, conditioning techniques, and disposal concepts;
Establishment of radiological protection criteria for post-accident conditions.
• Lessons learned – Member States' planning for post-accident waste management and necessary organisational and regulatory framework, including:
Scenarios to consider for evaluating and selecting appropriate waste management strategies
• Licensing process for post-accident waste management activities and facilities
• Public involvement e.g. in preparation and implementation of post-accident waste management strategies