

Activities of the OECD/NEA/CSNI Working Group on Fuel Cycle Safety in Spent Fuel and High-Level Waste Management

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Overview

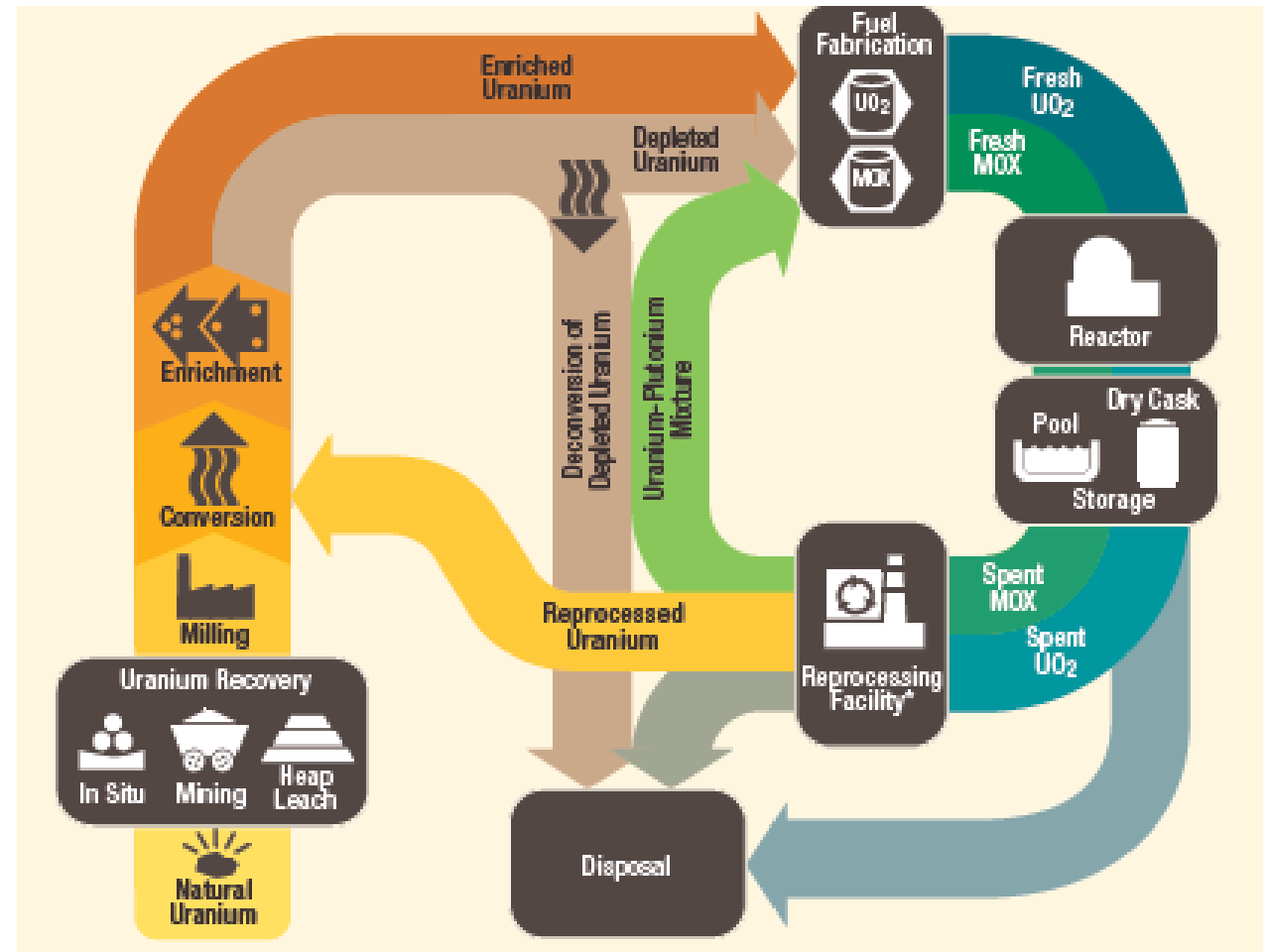
- About the Organisation for Economic Co-Operation and Development (OECD) Nuclear Energy Agency (NEA) Working Group on Fuel Cycle Safety (WGFCs)
- International Workshop on the Safety of Long Term Interim Storage (LTIS) Facilities
- Technical Opinion Paper on Long Term Interim Storage Facilities

OECD/NEA Working Group for Fuel Cycle Safety

- OECD/NEA – Assists member countries in ensuring the adequate safety of existing and future nuclear installations, through maintaining and developing the knowledge, competence and infrastructure needed to regulate and support the complete life cycle
- WGFCS – Advances the understanding for both regulators and operators of relevant aspects of nuclear fuel cycle safety in member countries

WGFCFS Mandate

- Mining and Milling
- Refining and Conversion
- Enrichment
- Fuel Fabrication
- Spent Fuel Storage
- Spent Fuel Reprocessing
- Decommissioning
- Radioactive Waste Management and Disposal Options (Including for Spent Fuel)
- Research and Demonstration Facilities



International Workshop of the Safety of LTIS

- Objective – Discuss and review current national activities, plans and regulatory approaches for the safety of LTIS facilities
- Three technical sessions
 - National Approaches for LTIS Facilities, Safety Requirements
 - Regulatory Framework and Implementation Issues
 - Technical Issues and Operational Experience, Needs for Research and Development
- Workshop proceedings published January 2014 [NEA/CSNI/R(2013)10]

LTIS Workshop Conclusions/Recommendations

- Important regulatory aspects of LTIS in IAEA Specific Safety Guide -15
- Long term storage (50+ years) should be part of an integrated program
- A holistic view of the whole process is needed; major regulatory effort
- Close the data gaps for long term behavior of fuel rods and fuel cladding
- Consider non-technical aspects of ageing, e.g., knowledge management
- Wet and dry storage each provide specific advantages
- Experimental data to assess mechanical behavior of fuel rods
- Develop solutions for long term storage of damaged fuel elements
- Delay in final decision results in lost opportunities for optimization

Technical Opinion Paper on Safety of LTIS

- Provide an overview of LTIS requirements and technical needs
- The TOP will focus on:
 - national approaches and expectations
 - inventories, storage systems, and strategies
 - regulatory framework, policies and regulations
 - licensing processes and procedures
 - knowledge, data and regulatory gaps and challenges, and national programs
 - research and development needs
 - considerations of lessons learned from the Fukushima accident
- In progress; questionnaire issued to member countries
- Expect to complete in December 2015

LTIS TOP Questionnaire

- Describe the national approach, including used or planned funding principles, and expectations for Long Term Interim Storage management of Spent Nuclear Fuel and High Level Waste in your country.
- Describe qualitatively and if possible quantitatively also the SNF/HLW inventory as well as the storage systems used.
- Describe the LTIS strategies being in use or considered.
- Describe the regulatory framework for LTIS: policy and regulations (a. Main limits and acceptance criteria for the environmental effects and public exposures for normal operation and accidents; b. Main safety design and radiation protection requirements)
- Describe the licensing process of the storage application in your country with focus on: supporting safety assessment – base case and specific requirements for LTIS; timeframe and renewal process; transportation considerations, if any, at the time of storage.
- Describe the main identified gaps and challenges for LTIS, as well as the national programs developed to address them. Please include considerations on how cross-cutting issues (knowledge management, recordkeeping) as well as non-technical aspects (e.g. public confidence and political commitment) are addressed.
- Describe the needs for R&D identified for LTIS.
- Describe the considerations on LTIS resulting from the Fukushima lessons learned.

Thank You