**Integration Group for the Safety Case (IGSC) Symposium 2024**  
*MOVING TOWARDS THE CONSTRUCTION OF A SAFE DGR – GETTING REAL*

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| **Abstract Title:**  Experiences on the preservation of essential information, data and knowledge gathered throughout repository implementation and operation | |
| Radioactive waste management (RWM) is highly demanding in the area of information, data and knowledge management (IDKM), due to the exceedingly long duration of repository programmes that tend to run for several decades, the vast volume of interrelated information, data and knowledge produced and the need to preserve it for a very long term. During the NEA initiative Preservation of Records, Knowledge and Memories (RK&M) Across Generations a systemic approach was developed integrating multiple and complementary mechanisms with varying characteristics to preserve knowledge and awareness about radioactive waste disposal facilities. In a follow-on initiative, the Radioactive Waste Management Committee established the Working Party on IDKM in 2019 with four expert groups to further support member countries in dealing with IDKM challenges in the development of national programmes for RWM and decommissioning.  One of the mechanisms for knowledge preservation, the concept of the Set of Essential Records (SER), was developed to assist radioactive waste management professionals in the selection of records deemed essential to aid future generations evaluating repository safety and making informed decisions. Within the Expert Group on Archiving for Radioactive Waste Management Activities (EGAR) the procedure to identify and select such essential records from the vast number of records produced during a repository program has been applied to national programmes and experiences and lessons learnt have been compiled now. In addition, EGAR has gathered comprehensive guidance on the principles for analogue and digital archiving, including archiving specific metadata, as well as database archiving, the open archival information system (OAIS) reference model, and digitisation of legacy records, which is of relevance for the SER concept. Furthermore, the Expert Group on Knowledge Management for Radioactive Waste Management Programmes and Decommissioning (EGKM) working amongst others on guidance on vision and strategy, processes, tools and technologies, and governance with regard to knowledge management systems is going to investigate how implicit knowledge can be managed and included into the SER.  In this presentation lessons learnt from the work in the expert groups and particularly from testing how this SER concept can be implemented by applying it to the records of a “real” repository (see also the Poster “Set of Essential Records (SER) - A mechanism to preserve essential information about a repository to future generations” in this conference) will be discussed; namely experiences with records from the Konrad mine for the disposal of low- and intermediate-level radioactive waste in Germany will be outlined. Specific aspects like challenges in identifying record contents of records, created more than 30 years ago for the safety case but also for several other aspects within the repository programme will be highlighted.  Based on the lessons learnt from all activities addressed in EGAR and EGKM a roadmap for implementing the SER concept is proposed and recommendations on reporting and management of records and knowledge in a safety case will be given. | |