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

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| **Abstract Number: 53** | **Poster P4.3** |
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| **Abstract Title: Activities within the Expert Group on operational Safety (EGOS)** | |
| **Abstract (300-500 words):**  The overall operational safety objectives in deep geological repositories (DGRs) for radioactive waste are similar to those in other operating nuclear facilities and in underground mining. The applicability and transferability of classical nuclear safety and mining safety regulations to DGRs must be examined in every DGR project, which may include conflicting regulatory requirements. As more high-level waste (HLW) disposal projects move towards implementation and some low and intermediate level waste (L&ILW) disposal projects come into operation, achieving and demonstrating operational safety of geological disposal facilities becomes essential for the success of license application processes. The Expert Group on Operational Safety (EGOS) was established to allow a more practical and detailed information exchange between the member states. The mandate of EGOS is to identify, evaluate, and help define international best practices in the safe operation of deep geological repositories. This covers especially the construction and operation phase of DGRs, and addresses the connection between operational safety and long-term safety. Within this mandate, EGOS has compiled a hazard database with all potential hazards that may be encountered in operating geological repositories for radioactive waste during design and safety assessment. Other activities aim at an exchange between the members and nuclear and mining industry to transfer knowledge and experience. A typical field for such an exchange is fire safety and ventilation. In June 2023, a virtual workshop was held to deepen the exchange between the EGOS members, discuss the latest developments in the national programmes, and learn from a return of experience from other industries. As key findings of the workshop it can be highlighted that, in parallel to the progress in the national programmes, the fire risk management concepts developed as well. Conceptual designs and preliminary strategies were further developed and specified. New technical developments in vehicle technology also influence fire protection concepts and fire risk management in GDRs. The use of battery driven vehicles has a significant impact on fire risk management and presents a major technical challenge in the upcoming tasks. The authors want to present the current activities and outcomes of EGOS within the two main topics, hazard database as well as ventilation and fire safety. | |