**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:**  Updating of the safety case for surface and near-surface radioactive waste repositories in operation (Richard, Bratrství and Dukovany) - part of the safety assessments, partial outputs 2022-2024 | |
| SÚRAO operates three radioactive waste repositories for the disposal of low- and intermediate-level waste, i.e. the Richard, Bratrství and Dukovany facilities.  The Richard near-surface repository is located near Litoměřice in part of the underground complex of the former Richard II limestone mine. It has been used since 1964 for the disposal of institutional radioactive waste from the health, industrial, agricultural and research sectors.  The Bratrství near-surface repository is located near the town of Jáchymov in the foothills of the Krušné Mountains in part of the former uranium mine of the same name. The repository has been in operation since 1974 and is intended exclusively for the disposal of radioactive waste from the health, industrial and research sectors that contains only naturally-occurring radionuclides.  The Dukovany surface repository, which is located within the Dukovany nuclear power plant complex, occupies an area of 1.3 ha. The waste is disposed of in reinforced concrete chambers. The facility is intended exclusively for the disposal of low-level radioactive waste from the operation of the Czech Republic’s two nuclear power plants, Temelín and Dukovany. The repository was commissioned in 1995.  In March 2021, SÚRAO initiated a six-year project concerned with updating the safety assessments (SA) of all three operational repositories. Based on the latest scientific and technical knowledge available, the resulting documentation will form the basis for subsequent periodic safety reviews, which will be submitted to the regulatory body (The State Office for Nuclear Safety - SÚJB).  The safety assessments will be based on updated:  a) geological models  b) hydrogeological models  c) FEPs  d) RAW inventories  e) assessments of the condition of the engineered barriers  (f) experimental research programmes concerning the materials used in the engineered barriers of the repositories aimed at determining the parameters required for the characterisation of the engineered barriers for the respective models and calculations  (g) operational and long-term safety scenarios  (h) operational safety assessments  (i) long-term safety assessments and  j) dose calculations for a representative person.  Selected outputs from the project (Updates of the 3D geological and hydrogeological models, Analyses of the inventories of the repositories and FEP catalogues) concerning the period 2021 - 2022 were presented at an NEA RWMC workshop held in Bucharest in July 2022.  The results of ongoing sub-projects for the period 2022 - 2024 will be presented in due course, i.e. The assessment of the condition of the engineered barriers, The development of operational and long-term safety scenarios and The assessment of the operational safety of the Richard repository. | |