**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:**  Shaping a Generic Roadmap for Regulator-Implementer Dialogue in Licensing Deep Geological Repositories (DGRs) | |
| **Abstract (300-500 words):**  The OECD Nuclear Energy Agency (NEA) Expert Group on Building Constructive Dialogues between Regulators and Implementers in Developing Disposal Solutions for Radioactive Waste (RIDD) is developing a generic roadmap towards licensing of DGR facilities, focussing on regulator-implementer dialogue (R-I dialogue).  This roadmap will provide a schematic approach towards licensing based on a series of steps to be combined and rearranged according to respective national frameworks. At each step, a common understanding of what is needed and roles and responsibilities will be defined. This roadmap will provide guidance to ensure regulatory independence is maintained and balanced with regulatory involvement. Safety case development has a central role in this interaction, via an expected feedback loop, to ensure both regulatory readiness for reviews and that licensing requirements are understood. Safety case development aspects will be informed by the NEA Integration Group for the Safety Case (IGSC) GeneSIS initiative.  The roadmap will build upon the first RIDD report1, and on the outcomes of a recent workshop2. Some of the RIDD report’s main outcomes include:   * R-I dialogue will pave the way towards licensing. * Dialogue should start as early as possible in the pre-licensing process * Dialogue should encompass both formal and informal approaches throughout a stepwise process – forming part of an overarching governance that is clearly acknowledged and communicated. * Attitudes and behaviors play a major role in the effectiveness of the dialogue (e.g. mutual transparency, confidence, respect). * Regulatory independence enables a sound basis for R-I dialogue development.   The Workshop2 provided a platform to deepen the discussion. Some key preliminary workshop outcomes include:   * The need to establish and formulate a common goal between regulator and implementer towards ensuring a “safe DGR”. * R-I dialogue should consider other relevant stakeholders, other regulatory bodies (e.g. environmental, mining). * Timing is key: postponing R-I dialogue/decisions could lead to a loss of confidence and trust of key stakeholders.   Beyond establishing adequate governance structures, attitudes and how roles are fulfilled by the implementer and regulator is important. For instance, regulatory independence does not equate to isolation. Constructive dialogue is vital to ensuring safety and best possible outcomes. It is equally necessary to create a shared understanding of common needs and challenges throughout the pre-licensing process.  Defining and communicating milestones is critical for a focused, efficient pre-licensing process that supports continuity of involvement and expertise, and informs license application preparation.  Among national DGR programmes, a range of pre-licensing approaches exists. Examples provided during the Workshop2 showed that typical pre-licensing steps can be defined, with supporting documentation such as regulatory framework establishment, R&D programmes, phenomenological bases, evolving safety cases, design information, strategic environmental assessment, and more.  Based on collected materials and with the support of relevant NEA working groups, notably the IGSC GeneSIS initiative, the roadmap will be further developed.  Building Constructive Dialogues Between Regulators and Implementers During the Pre-Licensing Phase of Deep Geological Repository Development, NEA/RWM/R(2022)4, OECD/NEA, January 2024  Roadmap towards DGR Licensing: Enhancing Regulator-Implementer Dialogue, NEA RIDD Workshop, hosted by BASE in Berlin, Germany on 23-26 January 2024 | |