

## **Comparison of the Atomic Energy Agency Safety Case Concept and the U.S. Nuclear Regulatory Commission Regulatory Approach for Low-Level Waste Land Disposal**

**Authors: Christopher A. McKenney, David Esh**

International Atomic Energy Agency's (IAEA's) Draft Safety Guide Number 355, "The Safety Case and Safety Assessment for Radioactive Waste Disposal," describes the necessary components, processes, and decision making for near surface land disposal of radioactive waste. The IAEA's project PRISM, "Practical Illustration and Use of the Safety Case Concept in the Management of Near-Surface Disposal," is focused at providing examples of the use of safety case in Member State programs. This paper describes the U.S. Nuclear Regulatory Commission (NRC) regulatory approach to licensing low-level waste land disposal. The paper will look at the current regulations and their basis, as necessary, in Title 10, "Energy," of the US Code of Federal Regulations (CFR) Part 61 and the supporting general regulations of 10 CFR 2, 20, and 51. It will discuss the available guidance, specifically focused on reviewing the performance assessment. It will describe the various major decision points in the regulatory process that an agency, like the NRC, would need to make decisions to ensure the safety and security of the public and the environment. The paper describes the components, processes, and decision making throughout the life of the facility, and provides a comparison with similar components out of the IAEA Safety Case Concept.