



Contribution ID: 120

Type: **Wedge Participant**

## Performance Requirements of Technical Measures for Geological Repository Safeguards

In 1988, several States began activities supporting the International Atomic Energy Agency (IAEA) in developing safeguards policy and approaches for the application of safeguards for the final disposal of spent fuel in geological repositories. These activities were coordinated through IAEA Member State Support Programs, including the multi-member State Program for the Development of Safeguards for Geological Repositories (SAGOR, 1994-2004) and Program for the Application of Safeguards to Geological Repositories (ASTOR, 2005-2017). The SAGOR program included a diversion path analysis for spent fuel disposal facilities, determination of safeguards technical objectives, and identification of potential safeguards measures for meeting those objectives. The ASTOR program supported the IAEA in assessing how the safeguards measures could be effectively implemented and provided recommendations with respect to the development of the measures. Some verification technologies have been developed in support of geological repository safeguards; others are currently under development. However, performance requirements that must be met by the safeguards measures for implementing effective safeguards at encapsulation facilities and geological repositories are not known to have been developed. These performance requirements are needed by the developers of verification technologies to guide development of the needed monitoring systems. This paper reviews the model safeguards approaches for spent fuel encapsulation plants and geological repositories and recommends performance requirements for each of the applicable safeguards measures.**strong text**

### Which "Key Question" does your Abstract address?

NEW2.2

### Which alternative "Key Question" does your Abstract address? (if any)

NEW2.1

### Topics

NEW2

**Primary author:** Mr MORAN, Bruce (Y-12 National Security Complex)

**Co-authors:** Mr FINCH, Robert (Sandia National Laboratories); Mr TOBIN, Steven (Los Alamos National Laboratory)

**Presenter:** Mr MORAN, Bruce (Y-12 National Security Complex)

**Session Classification:** [New] Safeguards Techniques for New Facilities and Campaigns

**Track Classification:** Preparing for safeguards new facilities, processes and campaigns (NEW)