

## Retrievability of Spent Nuclear Fuel after Final Disposal in a Salt Dome

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### RESUMEN

After closure of a repository, spent-fuel retrieval in a salt dome can be accomplished by either direct access by sinking boreholes or shafts directly into disposal areas or by indirect access by entering former disposal fields via a new retrieval mine. With state-of-the-art technology, salt mining can be carried out up to a rock temperature of 100°C. Calculations performed for a repository design suitable for the Gorleben salt dome show that 100 yr after disposal, large repository zones will be cooled down below 100°C. Thus, a significant part of the spent fuel in such a repository could be retrieved. A detailed study suggests that retrieval would be possible at any time after repository closure with presently available technology. Because of the massive effort and considerable time required for retrieval—which can be reliably discovered by surface monitoring, e.g., by remote satellite sensing—the diversion of fissile materials by secret retrieval is not a concern and is excluded.

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