Information on the
“Exploratory” Mine in Gorleben

Near Gorleben, a village of about 700 inhabitants on the Elbe River, lying in the far north-east of the state of Lower Saxony, are two surface interim repositories for radioactive waste. Further, there is a conditioning plant and a mine in a salt deposit partially explored for and planned as a final repository. By road, Gorleben lies 124 km southeast of Hamburg (Germany’s second largest city with 1.7 million inhabitants), 155 km northeast of Hanover (516,000). It was named as the location for a “nuclear disposal center” on 22 February 1977.

Imaginative resistance by locals and people from all over Germany scuttled the plan to build a nuclear reprcessing plant in the region known as Wendland. Since 1983 weakly and highly radioactive waste has been stored in the interim repositories, since 1995 highly radioactive waste has been brought there and parked in caskets called Castor (acronym for cask for storage and transport of radioactive material).

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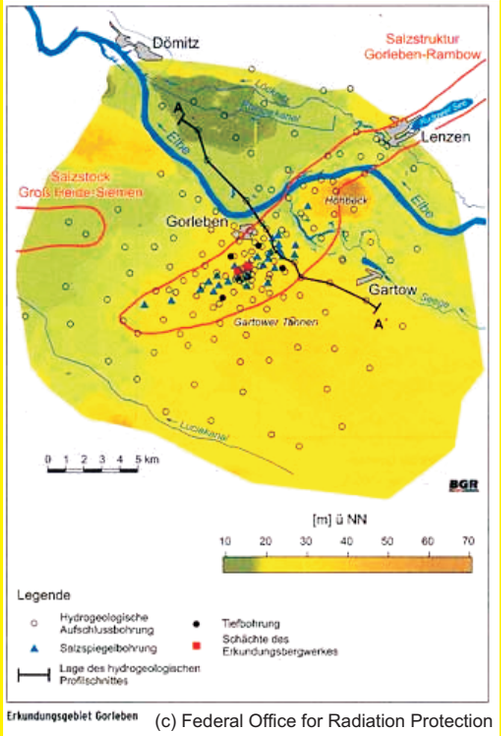
Time Line

- 1977 Decision for a 12 km² Nuclear Disposal Center Gorleben. The site area had been "prepared" in 1975 by an arson causing a devastating forest fire. Two years later a proposed reprocessing unit was taken out the plans.
- 1983 Due to the negative results the federal government stops the exploration on the surface, excludes the exploration of alternative sites and starts the underground exploration.
- 1984 First reposition of atomic waste barrels to the above-ground interim storage (ALG) for low and medium level radioactive waste.
- 1987 Serious accident during the deepening of shaft 1 of the exploration mine.
- 1995 First reposition of a "Castor" container to the above-ground transport container storage (TBL) that had been completed already in 1983.
- 2000 A "moratorium" interrupts the extension of the mine and adheres to its alleged potential suitability.
- 2010 The extension of the mine is continued "unbiasedly". A parliamentarian investigation committee is engaging in the reasons for the site selection for Gorleben.
- 11/2010 Last transport of high level radioactive vitrified waste block containers from the reprocessing unit in La Hague. Afterwards shipments from the Sellafield reprocessing unit (UK) follow.



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Safety Concerns

For decades pre-eminent geologists have contended that the Gorleben salt dome would not be a safe final repository for all kinds of nuclear waste, which it is intended to be from 2030 on.

In 1987 a shaft almost collapsed, water kept breaking in as the pit went deeper and was enlarged. The Gorleben pit is camouflaged as an “exploratory mine”; that means all work on it is governed by mining law, which excludes public scrutiny.

Only a local landowner, Count Bernstorff, whose salt rights were impinged, was able to litigate. Meanwhile the Salinas Salz (salt mining) company has emerged as an economically serious challenger to the construction of a final repository.

Background

It is no mere assumption that the decision for the "nuclear disposal center" Gorleben was a political one. 17 years later the then vice-president of the Geological Survey of Lower Saxony, Prof. Gerd Lüttig, reported how Gorleben came to be named. Premier Albrecht was annoyed and said to the professor: "The GDR [then communist East Germany] made us so angry with the Morsleben final repository that we're annoying them back now with Gorleben." Morsleben lies directly east of what used to be the inter-German border, Gorleben lies only 2 km from that former line. Had there been an atomic disaster in Gorleben at the time, more than 70% of the people who would have suffered within a radius of 30 km would have lived in the former communist German state. An area of about 7½ square kilometres over the salt dome lacks a protective overburden. And also where an overburden exists, it has holes. That means that ultimately underground water flows will carry death-bringing radioactive isotopes into the biosphere. Hence we speak of an "atomic toilet with upward water flushing". Not something anyone would install in their home, is it?

Prof. Eckhard Grimmel, a geomorphologist at Hamburg University, who studied Gorleben for a long time, warns about layers where water runs, the lack of barrier and the mobility of the salt dome. The salt dome extends under the Elbe River to the village of Rambow, about 20 km in a straight line northeast of Gorleben. It has collapsed at several places, creating lakes that have become tourist attractions.

Since there is no overburden as an effective barrier against the dispersal of long-lived radionuclides, the salt dome would have to carry the entire long-term "safety burden" on its own. The stored containers would offer no protection whatsoever because they would corrode in the aggressive medium salt. Hence the Gorleben salt dome is not suited short-term or long-term for final storage of highly radioactive waste.

From 1980, Prof. Grimmel advised the German Parliament about possibilities of disposing of radioactive wastes. In his new book "Kreisläufe der Erde" (circuits of the earth, ISBN: 3-8258-8212-8) he warns against making Gorleben a final repository: "It has been certain since 1984 that this salt dome is unsuitable as a final repository." Grimmel summarises: "The salt dome is not separated from water-carrying layers by an adequately mighty and gapless layer of clay. The salt dome is not at rest and still rises. Through salt dissolution the dome has already lost much of its substance and is being leached further. Additionally, it is doubtful that salt is fundamentally suitable for the final storage of highly radioactive wastes. Uncontrollable reactions of the salt (radiolysis [dissociation of molecules by radiation]), initiated by heat absorption and radiation, additionally endanger the stability of the salt dome."

There are more installations in the Gorleben nuclear complex: An interim storage for weak to medium radioactive waste, an interim repository for highly radioactive waste and a conditioning plant which is not in operation. The interim storage for highly radioactive waste is known from the transports of Castor casks, which are regularly blockaded by determined protesters despite martial-scale deployments of police. Every transport into the interim repository makes Gorleben more likely to become the final repository. Although a moratorium was imposed, the Castors keep coming, creating unnecessary pressure to make Gorleben the final dump.

More Information

Web-sites...

- Civic Initiative for Environment Protection: www.bi-luechow-dannenberg.de
- Castor-Nix-Da Campaign: www.castor.de
- Initiatives against the nuclear facilities in Gorleben: www.castor.de/diskus/gruppen/uebersicht.html
- More reports, press coverage and expert studies: www.castor.de/technik/endlager/endlagerinhalt.html
- Operator of the "exploratory mine": www.dbe.de

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