

Reporting waste disposal procedure

Making preparations for conditioning

- Determine waste types
- Identify suitable conditioning method and containers
- Compile an examination sequence plan

Registering for conditioning

- Application lodged with the supervisory authority
- Supervisory authority requests an independent expert to examine the application
- Supervisory body approves the examination sequence plan

Conditioning

- If necessary, crude waste transported to the conditioning plant
- Documentation produced by conditioner
- Independent inspector's report sent to the Trade Supervision Office in Lüneburg

Trade Supervision Office in Lüneburg approves storage

Waste transported by the German railways Deutsche Bahn AG

Storage

- Under the supervision of an independent expert

GNS reports

- Confirmation of arrival sent to shipper
- Current holdings reported to the Trade Supervision Office in Lüneburg

Final documentation of the entire waste disposal procedure



From Registration to Final Documentation

Safety considerations take top priority during the conditioning, transportation and final storage of radioactive waste. Various institutes check and approve the numerous steps involved, of which only the main ones are shown here. A type of check list, the examination sequence plan, ensures that the waste disposal procedure is performed and documented in individually verifiable steps.



GNS Gesellschaft für Nuklear-Service mbH, a company jointly owned and operated by the German utilities, is generally responsible for performing conditioning activities and operates the Gorleben interim storage facility. Conditioning means: Radioactive waste is dehydrated, dried, burnt, cut up or compressed to reduce its volume. It is then "packed" in such a way as to make it suitable for storage in interim or permanent facilities.

The Trade Supervision Office is the approval and supervision authority responsible for the BLG waste disposal facility.

Deutsche Bahn AG is responsible for transporting the waste material.

BLG, Brennelementlager Gorleben GmbH, is the owner of the interim storage facility.



Stringent Checks

The route which radioactive waste takes before it is placed in interim storage at Gorleben is long and involved. Long before the material is stored, reliable approval activities and examinations governing the precise procedure to be adopted are conducted.

An important aspect of this procedure is for examination and approval activities to commence at the site of origin of the radioactive material. This may be one of several different kinds of nuclear plants although mostly it is a nuclear power station. Generally speaking, the waste is conditioned at that site or at central facilities. This means



that, depending on its type, waste is reduced, treated and packed in various procedures. After being processed to make it suitable for interim or final storage, it is transported to the interim storage facility at Gorleben.

Our chart sets out the complex route which a waste disposal procedure must take before it is approved.

The standard procedure described in the chart takes about a year and ensures that the type and quantity of as well as the conditioning method used for radioactive waste is documented at all times.

Interim Storage Facility at Gorleben



Intensive efforts to minimise radioactive waste have led to a considerable reduction in volumes. Even so, some waste does arise – including in the power generation at nuclear power stations. When a plant is operated, serviced, cleaned or closed down, contaminated protective clothing or filter elements, for example, must be disposed of. These materials give off virtually no heat and their relatively low radiation can be easily shielded. Nonetheless, they must also be disposed of carefully.

The interim storage facility for radioactive waste at Gorleben is used to store this material safely until it is treated or placed in final repository.

Only solid radioactive substances are stored in the hall with a floor area of 4,500 m² and a height of 5 m. For this purpose, it is placed in packaging produced in accordance with the latest technological developments: casks from steel, concrete or cast iron. They are selected on the basis of the type of waste and provide secure protection.

This brochure explains the extensive examinations and approval procedures which radioactive waste must undergo on its route from a raw state to a product capable of being stored.

Published by: Brennelementlager Gorleben GmbH
Lüchower Straße 8, 29475 Gorleben

Interim Storage Facility for Radioactive Waste



Radioactive Waste – Making the Raw Product Fit for Storage