

REKS GmbH & Co KG

Company presentation





STRONG MATCH

As a joint venture between the companies K+S and REMEX, we offer our customers a wide range of sites, technologies and processes as well as a wide spectrum of services that is unique in the industry in the areas of **UNDERGROUND DISPOSAL**, **COVERING OF POTASH TAILINGS PILES** and **REKAL**. Because the world is our most valuable resource, we do everything to find the most sustainable and environmentally friendly solutions. This is how we contribute to protection of the biosphere.

When it comes to the disposal of sensitive materials, it's all about expertise. And it's about trust. We offer you partnership, transparency, and long-term safety with our underground solutions.

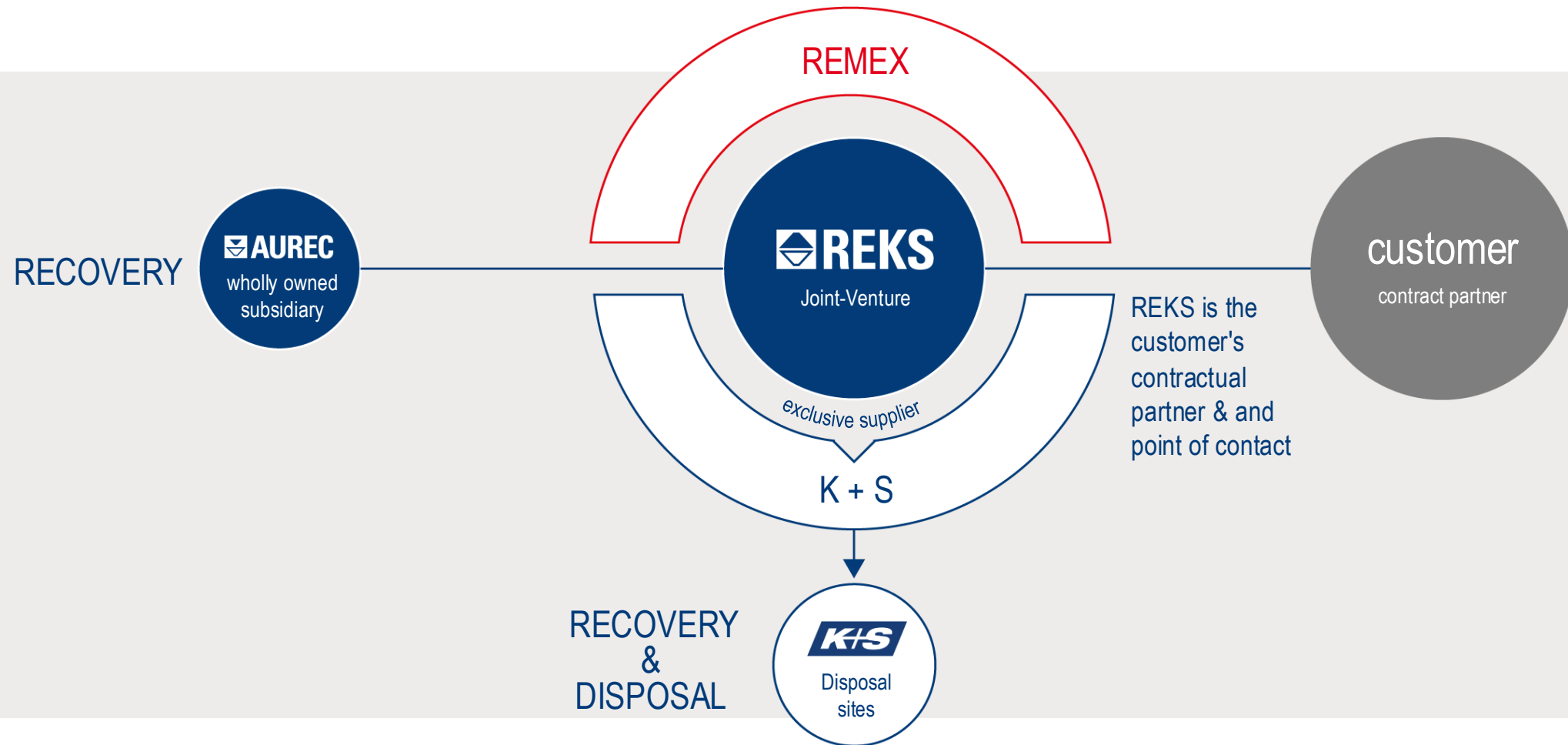
RENATURATION
PERMANENT GREENING

COVERING OF POTASH TAILINGS PILES
PROFESSIONAL & HARMLESS

UNDERGROUND RECOVERY
DISPOSAL WITH ADDED VALUE

UNDERGROUND DISPOSAL
MAINTANACE FREE & LONG-TERM SAFE

Shareholder structure – a joint venture of equal partners



Our business areas

UNDERGROUND DISPOSAL



COVERING OF POTASH TAILING PILES



REKAL



Capacities of the plants

Capacities (in tons / year)

Underground disposal	Zielitz	15.000
	Herfa-Neurode	80.000
Underground recovery	Zielitz	65.000
	Bernburg	356.000
	Hattorf/Wintershall	220.000
	Unterbreizbach	220.000



The locations of REKS-Group

REKS

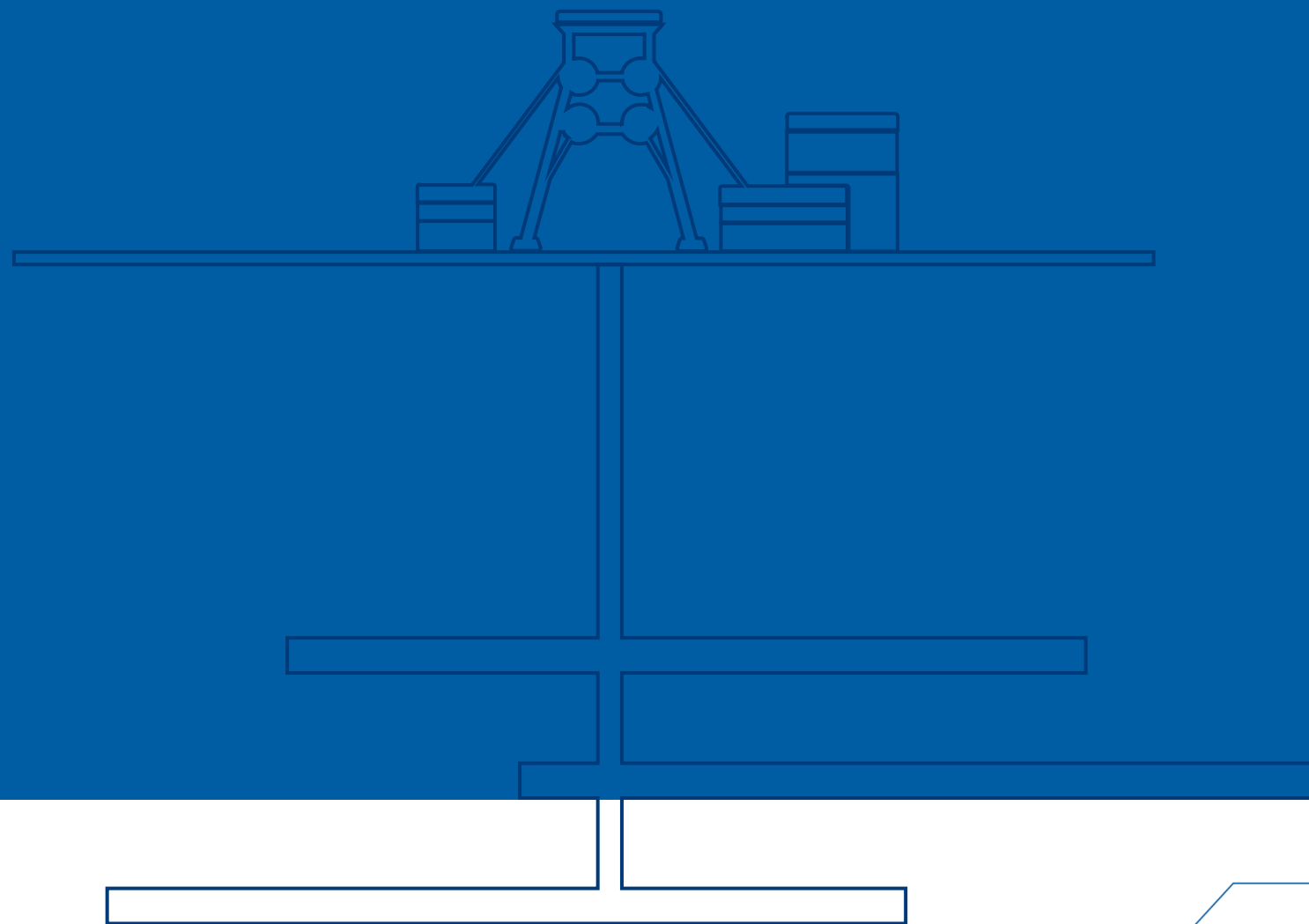
- Headquarters in Dusseldorf
- Administrativ locations in Dusseldorf and Kassel
- 49 employees
- Organized into: Finance & Controlling, Marketing & Communication, Supply Chain Management, Technical and Sales Department

AUREC

- Wholly- owned **subsidiary** of REKS
- Located in Bernburg
- 42 employees
- Specialised in the processing of waste for professional backfilling



UNDERGROUND DISPOSAL





Underground disposal

As specialists for the long-term safe disposal of waste, we have large capacities available in the two German **Underground Waste Disposal Plants** in **Herfa-Neurode** (Hessen) and **Zielitz** (Saxony-Anhalt).

Many years of experience and comprehensive know-how make REKS not only **experts** for **underground disposal**, but also for **underground recovery**. Unique processes have been developed to safely dispose of waste in the closed areas of the mines over the long term.

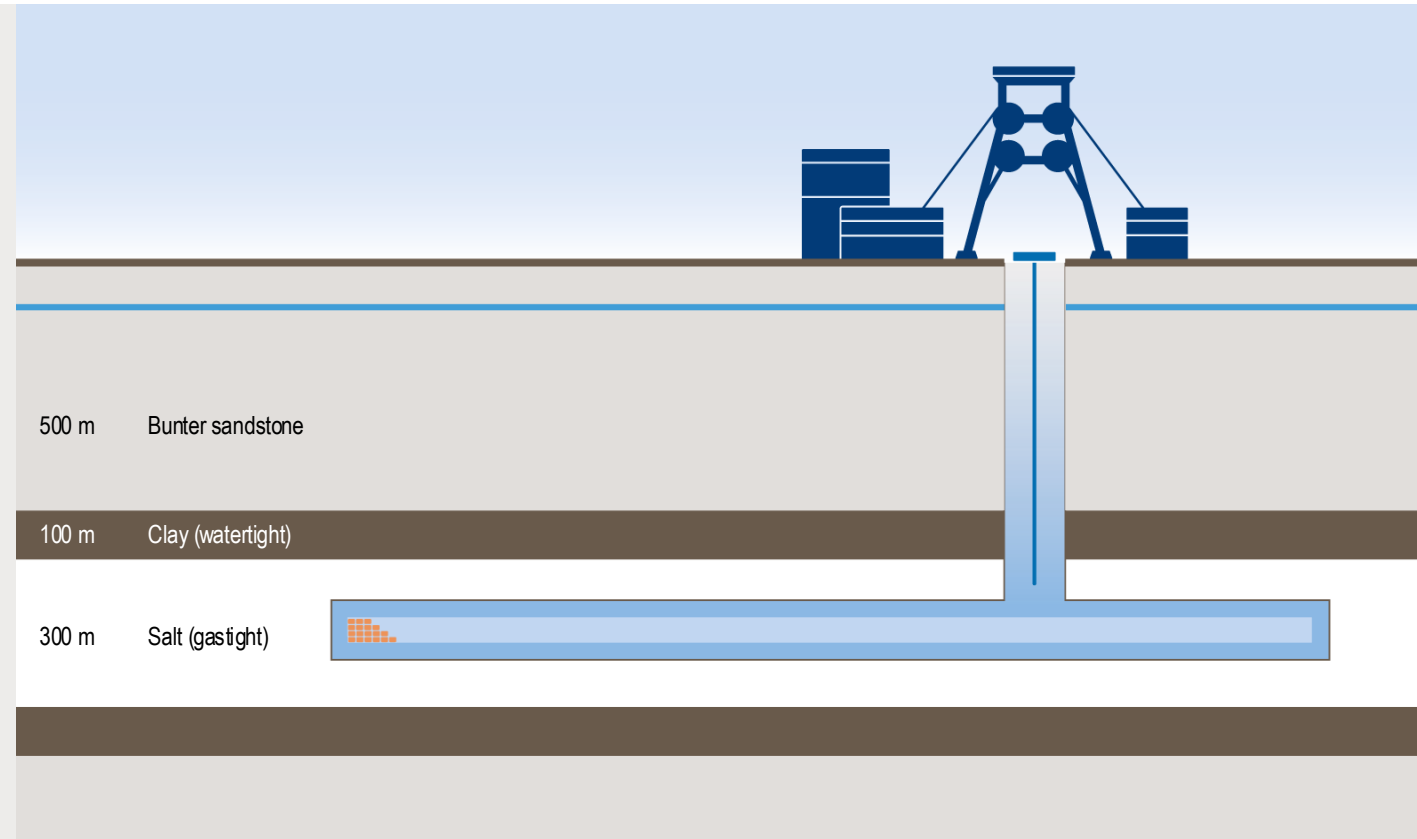
Underground disposal plant

We offer safety underground

Your waste is best taken care of in the **Underground Waste Disposal Plants**. There is no better solution. In mined mining fields, at depths of up to 800 meters, the natural geological conditions offer the safest place for dangerous substances

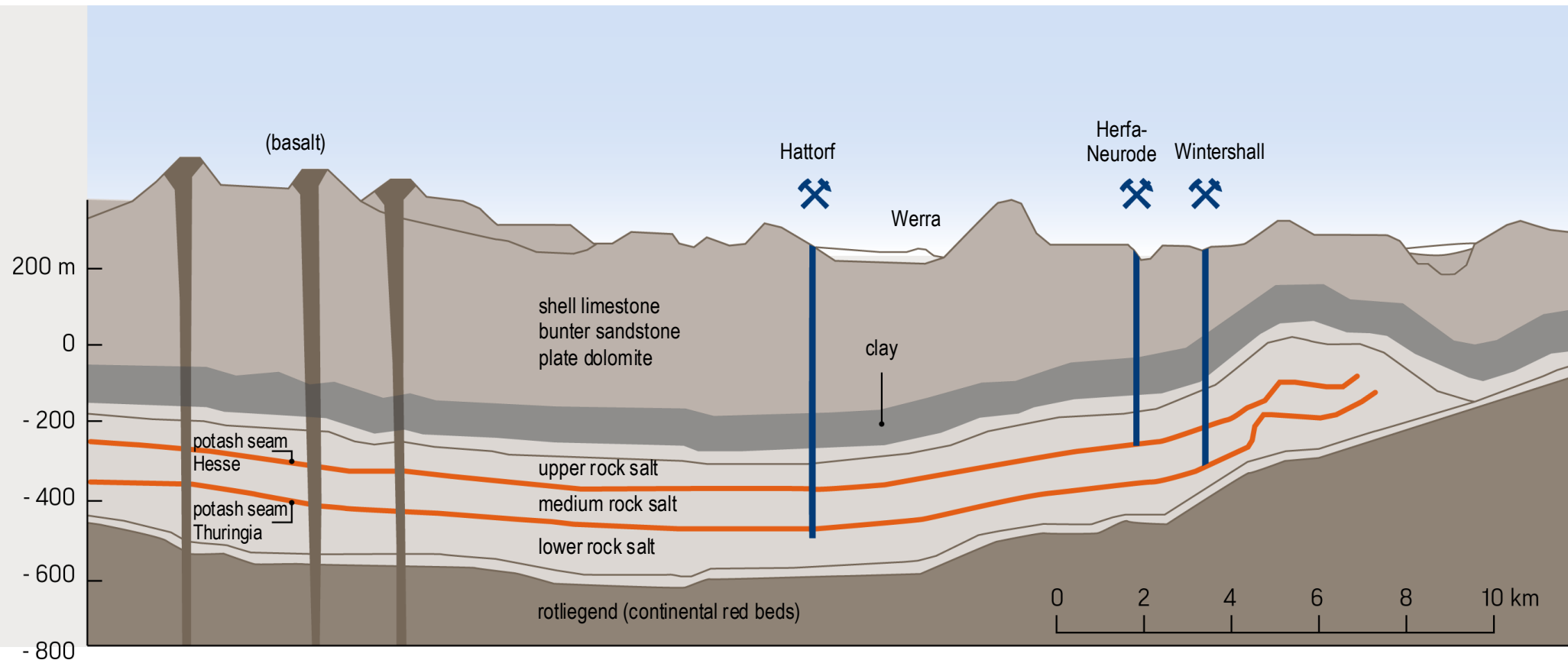
Examples:

- dangerous fiber waste
- electroplating residues
- hardening salt residues
- waste containing arsenic, cyanide or mercury
- residues from the steel and metal industry



Geology (exemplary Werra plant)

Thickness of the gas-tight deposit up to 500 meters





UTD | Multi-barrier-system

Natural barriers

- salt (gastight) 300 m
- clay (watertight) 100 m
- other rock layers 500 m
 - plate dolomite
 - bunter sandstone
 - shell limestone

Artificial barriers

- waste packaging
- chamber system with brick walls
- ramparts and dams
- sealing and long-term- safe filling of the shafts

Werra | Pit outline underground landfill (exemplary)





Underground waste disposal process

1. Arrival at the disposal site

Your waste must be packed into barrels, big bags, steel sheet containers or cage boxes. They reach the underground disposal sites of K+S by lorry or train. Unloading of sea containers is also possible in Zielitz. In Herfa-Neurode we also accept dusty waste delivered in silo lorries. They are placed on site in big bags.



Underground waste disposal process

2. Acceptance and check

Following high safety standards, all specifications are checked during the acceptance stage. Staff on site check the completeness of accompanying documents, declaration and packaging. Before the waste is landfilled underground, a retention sample is extracted for storage.



Underground waste disposal process

3. Transport to the storage location

The waste is transported many hundred metres below ground using a winding shaft. Special-purpose vehicles bring them to the storage location underground, which is often several kilometres away from the shaft. For safety reasons, different substance groups are also stored in different areas.



Underground waste disposal process

4. Disposal in multi-barrier system

At its destination, the waste is stacked in storage chambers. The multi-barrier system applies to landfilling: If a storage chamber is filled, it is sealed off with brick walls or salt walls.



Underground waste disposal process

5. Organisation and documentation

In the underground disposal sites of K+S strict regulations are followed. The storage location and time as well as the amount and condition of all waste are documented. In addition, a retention sample is stored underground in the specimen archive. This makes it possible to track where the substances are stored at all times.

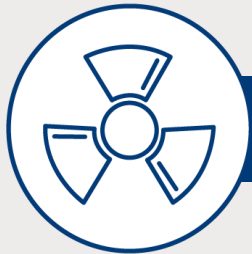


UTD | examples of waste types

- hazardous fibre waste
- electroplating waste
- hardening salt residues
- arson, cyanide or mercury-containing waste
- residue from the steel and metal industry
- filtration residue
- contaminated soil and building rubble
- evaporation residue
- filter dust

Exclusion criteria

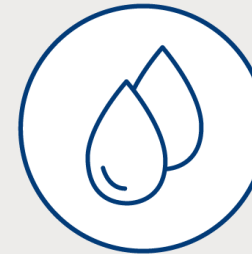
Waste with one or more of the following properties will NOT be accepted by any of the K+S sites.



Radioactive



Infectious

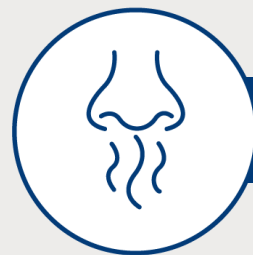


Liquid

Under backfilling conditions:



Explosive



Malodorous

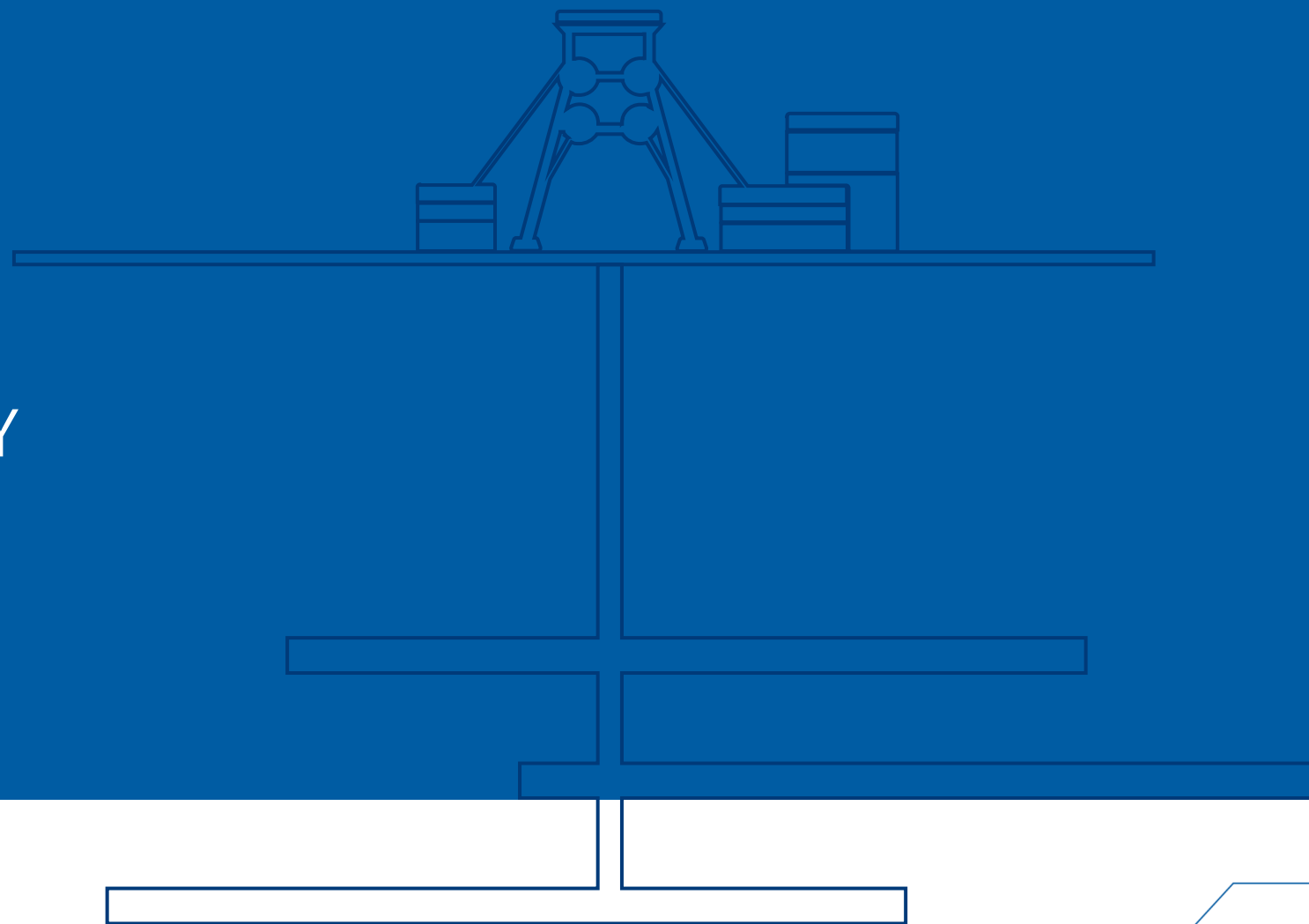


Highly Flammable

Procedure of order in the UTD



UNDERGROUND RECOVERY



Underground waste recovery

With **underground recovery**, we make a valuable contribution to our society. We offer safe disposal of air pollution control residues for numerous waste incineration plants.

For the permanent securing of cavities underground, the filling material must meet certain structural properties. While some types of waste bring the required properties directly with them, others are conditioned through the combination of suitable components.



Stacking backfill, Hattorf-Wintershall



Slurry backfill, Unterbreizbach



Tipping backfill, Bernburg



Stacking backfill

Hattorf-Wintershall

At the **K+S Hattorf-Wintershall** site, waste that can be conveyed pneumatically is handled in standing silos and processed into products in a mixing plant according to specific recipes. After being filled into big bags, they harden.

Waste that has already been delivered in big bags is stored directly if it is suitable. The big bags are stacked underground.

Remaining cavities are spun with damp salt. This is how the connection to the pillars is achieved.

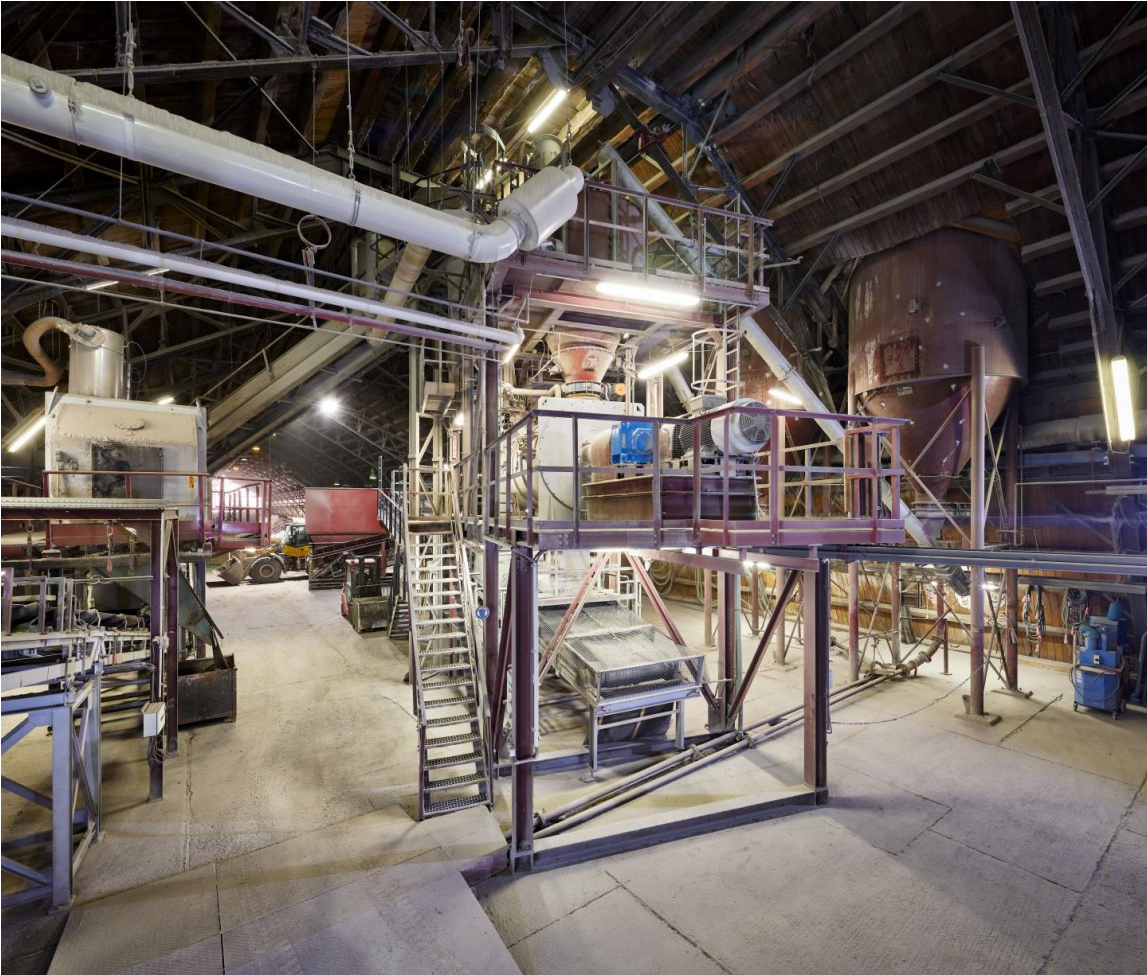


Slurry backfill

Unterbreizbach

At the **K+S Unterbreizbach** site, material that can be conveyed pneumatically is first transferred to standing silos and conveyed underground via closed pipeline systems.

With the addition of liquids (saline solution), a high-density suspension is created, which is pumped into cavities. There it hardens with complete setting of the liquid and exerts the supporting effect on the salt mountains.



Tipping backfill

Bernburg

At the **K+S** site in **Bernburg**, waste with a low pollutant content is processed above ground by **AUREC** into a mining backfill mixture that is suitable from the point of view of backfilling requirements. The material is transported underground via a shaft downpipe. Conveyor systems and dump trucks transport the materials to the cavities, where they are installed in the lintel offset. In the last step, the substances are compressed. Waste packed in big bags can also be transported underground via the shaft transport and stacked there.



Covering of potash tailings piles



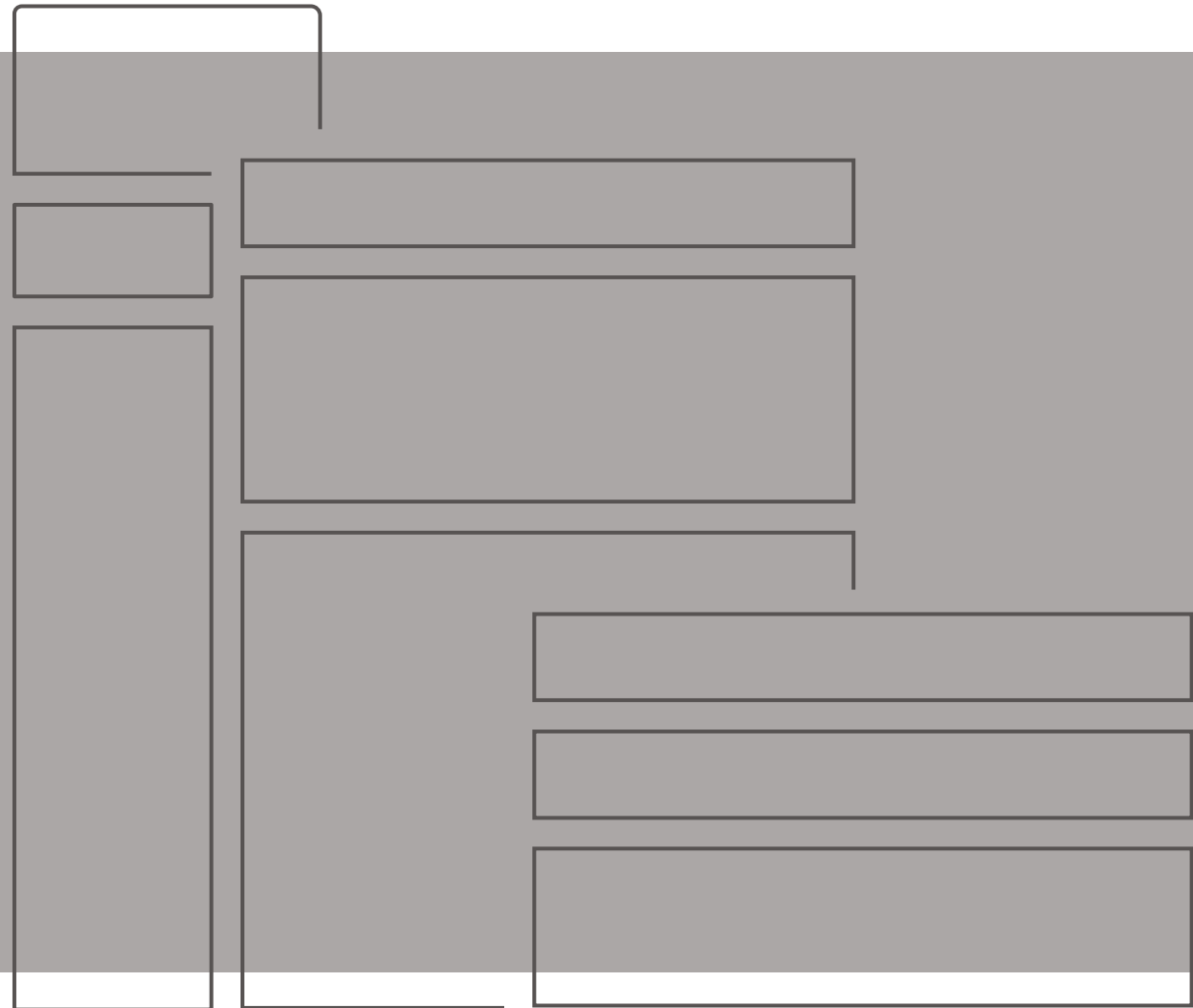
We create new habitats

In cooperation with K+S, REKS focuses on covering the tailings piles and thus makes an important contribution to the sustainable production of potash salts.

Our main task is the procurement of suitable materials that can be used for the covering and the development of covering processes.

- Reduction of saline water
- conservation of natural resources
- Saving of disposal capacity
- increasing biodiversity
- CO₂ savings

REKAL



REKAL: for a sustainable secondary aluminum industry

As an agent for K+S Minerals and Agriculture GmbH, REKS offers services for the secondary aluminum industry:

- sale of high-quality salt flux
- recycling of saline aluminum slag
- sale of aluminum granules
- safe disposal of filter dust

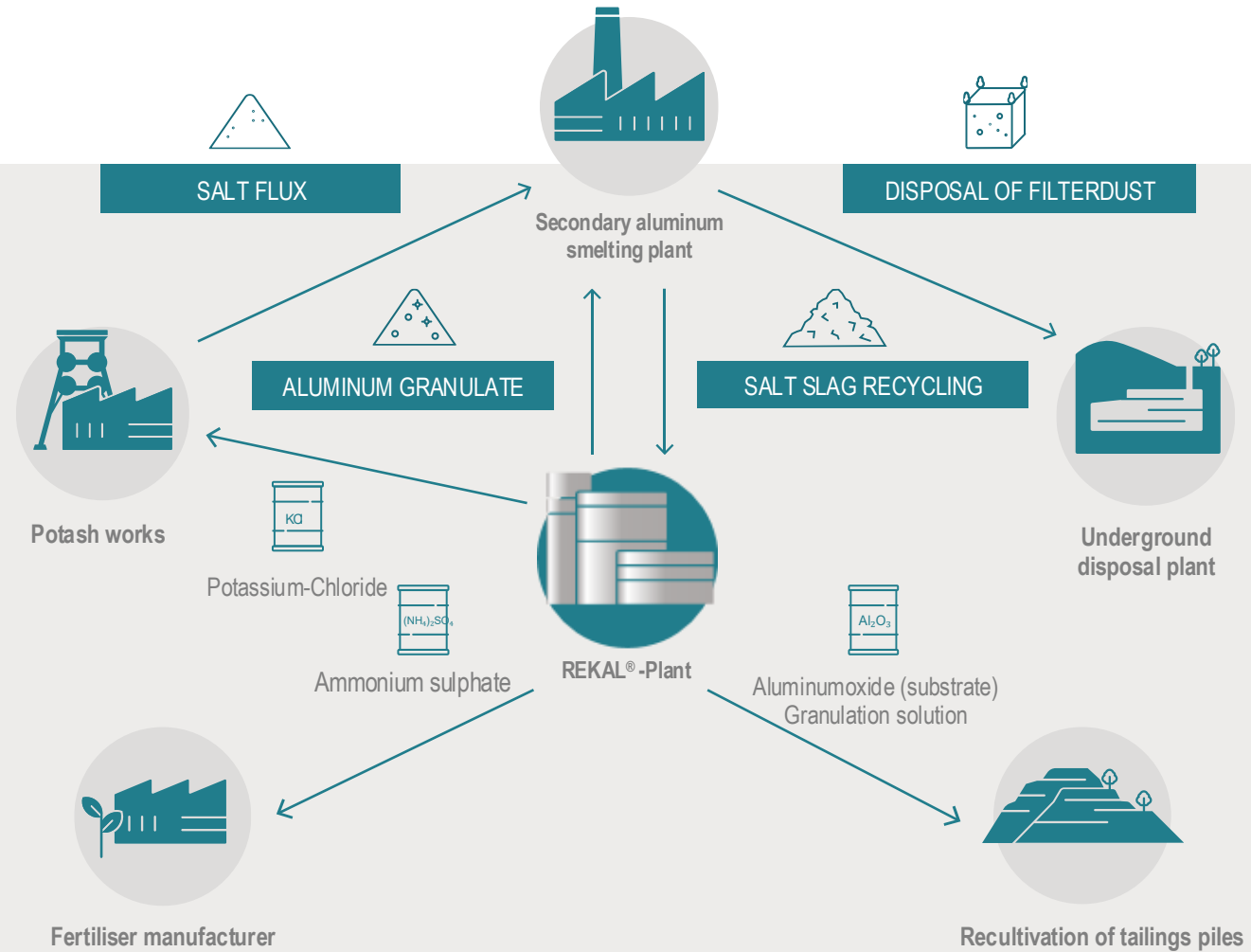
The products **Montanal®** and **Alasal®** stand for **efficient aluminum recycling**. High-quality, pure and with a residual moisture content of less than one percent, they meet the decisive requirements for the best results in terms of metal yield. The products have an ideal melting point, are dry and particularly pure.



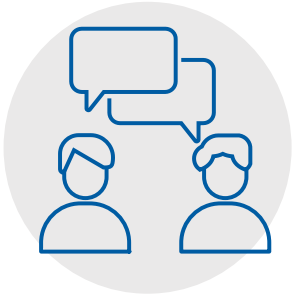
ALASAL®

MONTANAL®

REKAL Scheme



We offer solutions for the entire disposal process



Comprehensive consultation

Our Key Account Managers are experts in all aspects of waste management. We also offer contacts in other European countries



Careful analyses

We cooperate with certified laboratories and assessors to obtain the necessary analysis for the approval process



Support in the approval process

We are familiar with the relevant official requirements and support our customers in the process of disposal certificates or notifications.



Safe transport and suitable packaging

The appropriate transport and packaging requirements are subject to the verification or notification procedure. If necessary, our experts will coordinate the transport and provide support in procuring the necessary packaging materials



Security & certification

With our solutions, we offer the highest safety standards which are maintenance free for our clients. Both we as REKS and our recovery and disposal solutions are certified according to EfbV.

How to reach us

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REKS Online



THANK YOU
FOR YOUR ATTENTION

NAME