



UNDERGROUND WASTE DISPOSAL

Europe-wide disposal management
Sustainable safety
Customer-oriented solutions





Full service performance in all of Europe

Safety and professionalism in waste disposal management

In 2006, 94% of our customers expressed full satisfaction

C O M P A N Y

The K+S Group is one of the world's leading providers of fertilisers and plant care as well as salt products. K+S operates underground disposal plants in the decommissioned mining claims of two potash mines located in Saxony-Anhalt and in Hesse, – among them the first underground disposal plant worldwide, Herfa-Neurode, which began operations in 1972.

As an independent enterprise within the K+S Group, K+S Entsorgung's scope of services comprises the complete process chain related to waste disposal – and may even include packing and transport solutions. Together with the European agencies belonging to the K+S Group we also offer our services to our international clientele.

A large range of waste types, residues and polluted materials from various industrial sectors may be deposited. Typically, many of our clients may be found among the chemical and metallurgical industries, as well as in the pharmaceutical, gas and electrical sectors. But there are also incineration plant operators, state-controlled-authorities and municipalities, as well the waste disposal industry itself.

We profit from a technological and logistic network, as well as from the experiences gathered in our group of companies. Additionally, this network offers financial security. Short-term investments as reactions to market demands may be realised from our own resources. This enables us to offer you extensive advantages in the waste disposal management, as your expert partner.

Tied into the network of a global player, K+S offers an extensive range of advantages for waste disposal management.

Reception of wastes, residues, inherited burdens and construction waste

Transport management

Assume responsibility

Packaging management

DISPOSAL | PERFORMANCE

We offer economically feasible solutions to our customers. In a face-to-face dialogue, our specialists survey the respective waste situation, and propose appropriate solutions for disposal. As we analyse the wastes and also prepare official authorisation procedures, the entire process may proceed without delays.

Depending on toxicity, ph-values, residual moisture and fine dust proportion of the wastes, steel drums, steel containers or big bags are chosen – and may be delivered directly to our customers. Beyond that, we offer to take on trucking, silo-lorry or rail transport. Our underground waste disposal plants are equipped with their own railway sidings, and are well connected to motorways and arterial roads.

During an acceptance control all documents, the volumes delivered, and packaging status are examined. The wastes themselves are subjected to an X-ray fluorescence analysis. Providing the waste's consistency complies with the relevant approvals, they are then transported via the shaft, and taken below ground to their final destination chambers by special vehicles. Acceptance of these wastes also results in a transfer of ownership, and therefore responsibility, to us.

K+S offers extensive customer liaison to its clients, throughout the entire disposal process, and, if required, takes on handling of all related procedures.



Depositing in depths of 500 to 800 metres

Protected by natural and by man-made barriers

Isolated from the biosphere

More than 100 years of mining experience

UNDERGROUND | SAFETY

At our underground disposal plants, wastes are stored in depths between 500 and 800 metres, removed from the biosphere, way below the ground water table. Here they are sealed off by thick rock layers, which will withstand tectonic movement and even earthquakes. The deposits are sealed gastight by up to 300-metre-thick rock salt layers, and are separated from ground water by beds of clay. The beds of bunter above contain additional water-tight layers.

In addition to these natural barriers, man-made technical barriers are erected. Packaging appropriately shapes and coats the wastes. Masonry walls serve to separate the individual material groups, sealing them off against each other. As soon as a claim is filled, it is hermetically closed by up to 15-metre-thick walls.

The underground waste disposal plants are organised just like storage facilities. In an underground sample archive, a reference sample taken from each waste to be stored below ground is kept. Place and date of the storage are documented. Every storage location, every volume and every waste type is known. This allows us to quickly locate and to retrieve waste, should this be required by our customers.

The underground disposal plants of K+S Entsorgung are eminently suitable for long-term disposal of hazardous wastes.

More than 100 years of mining experience, geological expertise and an exemplary infrastructure enable K+S to offer sustainably safe management of hazardous and special wastes. Short-term interim solutions are no alternative.





Two underground waste disposal plants

State-of-the-art infrastructure

Approximately 300 000 tons annual capacity

S I T E S | C A P A C I T I E S

The underground waste disposal plant Herfa-Neurode in Hesse is the first and largest of its kind worldwide. And since 1995, our underground waste disposal plant in Zielitz, Saxony-Anhalt, is available as a second, equally qualified location.

Both locations have been provided with state-of-the-art infrastructure and have been certified as Class IV Deposits, the highest possible safety standard. The underground waste disposal plants have been approved as qualified waste management facilities that work in accordance with DIN EN ISO 9001:2000, and have been attested long-term safety, confirmed by independent expert opinions.

Within a very short period, both disposal plants are capable of efficiently and safely receiving and storing tens of thousands of tons of hazardous wastes. In order to achieve this, Zielitz offers technical capacities of 70 000 tons annually; Herfa-Neurode offers technical capacities of 200 000 tons. At both sites together, nearly 3 million tons of environmentally hazardous wastes have already been deposited. The smaller Zielitz facility offers capacities for another 2 million tons.

If some day in the far future these capacities have been depleted, we will fill the remaining shaft, closing off the last connection to the exterior, and thereby totally isolating the wastes from the biosphere.

High quality standards and enormous capacities are the hallmarks of our underground waste disposal plants.



Safe disposal underground

State-of-the-art technology

Many years of experience

Cross-border solutions

WASTE | DEVELOPMENT

Among experts, underground disposal is considered to be the safest method of disposal for hazardous wastes.

K+S Entsorgung has developed this highly efficient mode of disposal, uniting its many years of experience with state-of-the-art technology. Disposal solutions are consistently created in harmony with our clients' needs.

The acceptance of wastes is done in compliance with clearly defined criteria: many of the wastes accepted are already storable in their original state, while others still need to be conditioned. Deposit safety does require us to refuse a small number of waste types.

For waste conditioning we draw on our reliable networks and the expertise of our long-term partner companies. Our main criteria for the selection of our partners is that their standards of safety and quality need to be the same as ours – this is the only way to assure consistent safety.

All services by K+S Entsorgung have been developed in line with the market and in harmony with our customers' demands.

K+S Entsorgung is also active and experienced on an international level. Therefore, we are able to offer cross-border European solutions. Our service is encompassing – we offer close customer liaison during the entire authorisation and notification process.



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