

## Consortium hazardous waste deposit Kölliken (HWDK), Kölliken AG

### Hazardous waste deposit Kölliken leachate treatment plant

#### Project description

The installation comprises a biological stage for decomposition of carbon and a nitrification with interposed filtration and activated carbon treatment. Before the biological process, the leachate is prepared in a mixing vessel and storage tank as well as precipitation/ flocculation sedimentation. Due to the shortage of space and the building regulations the entire installation has been conceived in a multistory building.

- Location: HWDK, Kölliken, Switzerland
- Reference person: Mr. J.L. Tardent
- Duration: 1989-1995
- Construction sum: 29 Mio CHF

#### Highlights

- Optimal process combination to meet the high purification requirements set by environmental authorities.
- Strong fluctuation of the landfill leachate flow
- The leachate of the landfill is highly odorous, corrosive, contains different halogenated hydrocarbons and high concentration of ammonium and different fractions of salt.
- sensitive environment in immediate neighbourhood of residential buildings
- high requirements on equipment availability

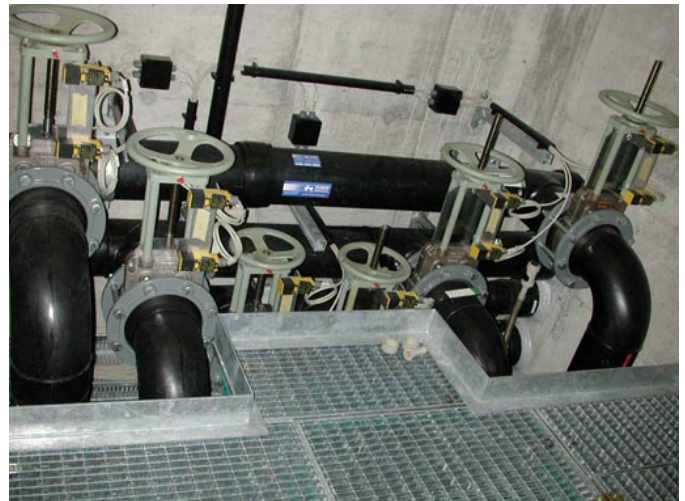
#### Our services

- Forecast landfill leachate, preliminary study and choice of procedures based on pilot projects by Ciba (ammonium precipitation and nitrification)
- Overall project planning
- Tender, offer comparison, contract for work and labour (130 contractors/distributors)
- Construction and monitoring management
- Initiation
- Operational advice



above: rotating disc filter for decomposition of carbon, in the background three activated carbon filter with 3 x 5m<sup>3</sup> volume and total 2550 kg carbon

right: work of maintenance at the rotating disc filter for the nitrification, entire overgrowth area 7315m<sup>2</sup>, volume of water 33m<sup>3</sup>



above: complex installations in difficult space measures, approx. 160 automatic fittings, 130 hand fittings, 80 engines and 330 measuring instruments (analog and digital)

