

Location and name of the project:	<b>Landfill Hennickendorf</b>	Dimension:	<b>ca. 12 ha waste deposition area</b>
contracting authority:	<b>Stadtwirtschaft Strausberg GmbH</b>	Turnover:	
Processing time:	<b>2000</b>		

**Project description:**

**Plan of a landfill gas extraction systems with energy recovery**

At the landfill Hennickendorf were disposed in 1976 to 2002 about 2,14 mio m<sup>3</sup> municipal solid wastes. The landfill consists of about half in a old part before 1990 and an new strong gas generating part after 1990.

It was to plan a venting system for the old part and a venting system for a new part, where the compaction of fresh municipal wastes take place. Additional the plan of the venting after closing the landfill in 5 to 10 years has to be prepared.

Utilisation of landfill gas was the essential requirement of the contracting authority (County administration)

- Six month venting trial with investigation of the gas amount and of contaminants (incl. organic silicium compounds)
- gas prognosis ( minimal 200 m<sup>3</sup>/h up to maximal 700 m<sup>3</sup>/h utilisable landfill gas)
- recultivation concept with investigation of variants of the capping system
- concept of containment of wastes
- testing of 4 gas well
- planing of additional 11 gas wells (1st stage)
- planing of additional 3 gas wells (2nd stage)
- planing of the complete landfill extraction system , crilled vents, condensate traps, booster unit (100-500 m<sup>3</sup>/h), flare (1.100 bis 1.200 °C), electricity generation etc., all needed technical units with safety equipement, roads and infrastructure; modulare system
- landfill gas utilisation system (1.282 kW; 469 kW electrical power)
- aftercare and afteruse concept for the total area incl. monitoring of groundwater and leachate

The planing included the successful concept of an operating company with input of the electrical energy in the public supply mains

Planing in co-operation with G.A.S. Energietechnik GmbH, NL Queis.

**The approval of the proposed plant is due to the Landesumweltamt Brandenburg issued. The plant was built in 2006 and the projected gas flow was correct.**

Location and name of the project:	<b>Municipal Landfill Hennickendorf</b>	Dimension:	<b>ca. 34 ha total area</b>
contracting authority:	<b>District Märkisch Oderland</b>		

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Handelsregister Potsdam HRB 9322

**Project description:**

**Concept for restoration of the landfill area**

At the landfill Hennickendorf were disposed in 1976 to 2002 about 2,14 mio m<sup>3</sup> municipal solid wastes. The landfill consists of about half in a old part before 1990 and an new strong gas generating part after 1990.

- ground landfill after clay open-cast mining. drainage area ca. 1,5 km<sup>2</sup>
- dewatering daily ca. 1.000 m<sup>3</sup> water
- artificial drawdown about 6 - 8 m for three decade ago
- waste body up to ten meters in groundwater
- nearby a 2 ha see area in the draining area

The risk assessment has been updated. This geological and hydrogeological data and microdata tens of thousands of water monitoring of the last 20 years were regenerated.

There have been completed variants for feasibility and technical effort for

- complete landfill mining and landfill mining in parts
- cut-off-walls, slotted walls
- changes in water regime
- different filling materials in compliance with the current market
- different landfill liner systems (double liner systems), leakage control systems
- cost evaluation
- estimate of costs for different technical systems and variants

**A preferential variant was propose and accepted by the responsible authority.**

**Our concept is already realised.**