

Landfill Leachate Treatment

STM-Aerotor™ Biological Nutrient Removal System

CASE STUDY

Location: Hengelo, Netherlands
Owner: City of Hengelo

Treatment Challenge

The sanitary landfill in Hengelo produces a maximum of 76,000 gallons per day of leachate. In order to allow the leachate to be discharged to the local municipality, the elevated levels of BOD and ammonia would need to be significantly decreased. In 1995, the City of Hengelo conducted a pilot study of the STM-Aerotor™ process in efforts to find a process that would reduce the leachate concentration to acceptable levels.

The pilot study was conducted over an eight-month period. The average influent and removal efficiencies of the pilot study are shown in the graph to the right.

The pilot study results produced treatment levels greater than expected and, shortly thereafter, a full STM-Aerotor™ process was purchased to treat the leachate.

The Helgelo, Netherlands, plant is equipped with six STM-Aerotor™ units installed in three adjacent basins. The process has a total basin volume of 317,000 gallons with a 15 ft side water depth. The modular design of the process allows for common-wall construction, saving in land area and capital costs.



Average Influent and Removal Efficiencies

	COD (mg/L)	NH4-N (mg/L)	TKN (mg/L)
Influent	3,578	1,131	1,472
Removal	70%	96%	95%

