



alpha bio

WASTEWATER INNOVATION

Landfill leachate biological pre-treatment stage – Mavrorachi Landfill

In the beginning of 2015, a new landfill cell in Mavrorachi landfill site went into operation, receiving waste from Thessaloniki region (population of 1,300,000) and resulting in a daily production of 200 m³ leachate, characterized by high organic load and increased salinity. Treatment of the leachate coming from the new cell was tested in the on-site WWTP, which till then had been used for the treatment of the leachate originating from the two older landfill cells with much lower organic content. The addition of the new leachate caused the biological activity to nearly collapse due to the significant overload. By applying the bioaugmentation process, the plant now manages to cope with the increased organic load, by gradually reducing the incoming COD by more than 85%, although leachate's electric conductivity is more than 30 mS/cm. As a result, the leachate complies with the technical specifications of the downstream Reverse Osmosis stage, where post-treatment of the biologically treated wastewater takes place producing a high-quality final effluent.

