CONSTRUCTED WETLAND SYTEM FOR TREATMENT OF TAGLIETTO LANDFILL LEACHATE IN VILLADOSE

ORIGINAL NEED

The realization of a constructed wetland system for landfill leachate treatment has been set in the framework of ensuring quality, security and respect of environmental standards for the discharged wastewaters of Taglietto 1 and Taglietto 2, located in the city of Villadose (RO) and managed by Ecogest Srl. The construction of the plant, which represents the first example in Italy of landfill teachate treatment based on wetland system, was achieved in 2010 and is expected to start working.

The available analysis does not reveal the presence of relevant quantity of heavy metals nor organic micropollutants in the landfill leachate to treat, but the COD and Ammoniaca figures are very high, both being around 1000-1100 mg/l. It has been planned to treat a daily flow rate equivalent to around 40 m^3/g.

LOCATION
City of Villadose (RO)
Region of Veneto
Italy

COMMITTANT
Ecogest s.r.l.

NUMBER OF PERSON EQUIVALENT
338 (equivalent to the COD charge)

WASTEWATER TYPOLOGY
Landfill leachate

PLANT TYPOLOGY
VF1+ VF2+ VF3 + HF1+HF2+FWS+Pond

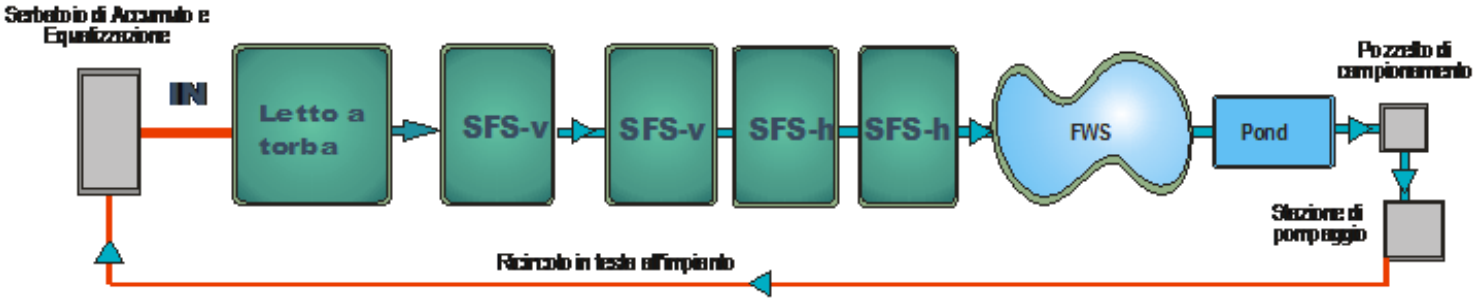
AREA (M2)
5740

YEAR OF REALIZATION
2010

DESCRIPTION

The plant scheme is composed of four depurative lines in parallel, except for the last sharpening stages (sixth and seventh stage) which are settled on one common line:

- First stage with vertical subsurface flow with peat of 1.000 m^2;
- Second and third stage wich consists in a vertical subsurface flow treatment systems settled in sequence, each of them being 800 m^2;
- Fourth and fifth stage with horizontal subsurface flow systems settled in sequence, each of them being 900 m2;
- Sixth stage with free water surface system (660 m^2);
- Seventh stage composed of a pond, with a surface equivalent to 680 m^2.



Scheme of the plant

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