SBT at Vazir Sultan Tobacco, Hyderabad, India

Country: India
Landuse: Neighbourhood & Individual
Scale: Neighbourhood & Individual
Objectives: Ownership: Private
Intervention: Project

Location Map, Hyderabad, Andhra Pradesh
Source: Google Map

Designed Capacity: 70 KLD later upgraded to 100KLD
Area: 400 sqm

Background

Vazir Sultan Tobacco factory implemented SBT systems to treat the factory effluent in order to comply with the norms of Andhra Pradesh Pollution Control Board (APPCB) for discharging the treated water into municipality sewers. The effluent is primarily from tobacco processing. Canteen wastewater is also mixed with the effluent.

Timeframe

Year of Commissioning: 2005

Project Collaborators

Implementing organisation: Life Links Eco Technology Pvt Ltd
Strategies and Interventions

Wastewater is screened through metal mesh screens to remove solids. After screening it percolates through the trenches and is collected into the collection tank. The wastewater is then pumped to bioreactor filled with suitable media. There are two reactors in VST plant. Reactor one carries out physical separation of suspended solids. As the inlet of VST plant has high concentration of suspended solids, granular mineral additives are embedded inside the bed to enhance the filtration of the suspended solids.

Reactor two contains media of soil with biological culture laid in a ridge and furrow pattern. The filtered wastewater is recycled on to the media till desired quality is achieved. Overall time of operation (wetting cycle) varies from 5 to 11h. The bed is then left to rest prior to next cycle of use.

The process runs on batch mode. It is subsequently pumped on to the media in Reactor 2.

Outcomes of the Project

BOD reduction: 90%
COD reduction: 86%
TSS reduction: 92%

(Source: Life Links, Hyderabad)

Funding and costs

Capital cost : Rs 7-8 lakhs
O&M: Rs 2 Lakhs per year

Additional information

References

https://www.cseindia.org/sbt-plant-at-vazir-sultan-tobacco-vst-hyderabad-3777
http://lifelink.in/projects/vazir-sultan-tobacco-vst/
https://www.youtube.com/watch?v=tS2Z9_rOPlw

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