



SEPTAGE TREATMENT PLANT at Mangalaghat, Puri



About

As per mandate under AMRUT programme, Orissa Water Supply & Sewerage Board (OWSSB) has constructed a 50 KLD capacity Septage Treatment Plant (SeTP) at Mangalaghat, Puri in October, 2017. The SeTP employs co-treatment method for treatment of septage where the liquid fraction is treated in a Sewerage Treatment Plant (STP) located adjacent to the SeTP.



Background

The holy town of Puri is the first in Odisha to have a Sewerage and Septage Management Project. While in the first phase, a sewerage infrastructure has been developed to cater 18,400 properties, majority of the population still depends on the on-site sanitation practices.

In the month of the October 2017, the Puri (M), hired a professional agency to provide emptying services in the town of Puri at a lower price. As a result of the lower price and in time services, the Municipality saw an increase in the number of trips being emptied at the plant and eventually reduced water pollution.



The ULB at present is charging Rs 790/- per trip for the emptying services.

Infrastructure

A Septage Treatment Plant (SeTP) having the capacity of 50 KLD (Kilo Litre per Day) was constructed by OWSSB (Odisha Water Supply and Sewerage Board) in the month of October 2017. The plant was constructed under the AMRUT (Atal Mission for Rejuvenation and Urban Transformation) scheme and is one of its kind in the nation as it uses Co-treatment technology for the treatment of sludge being unloaded.

The settling-cum-thickener tank of SeTP allows heavier particles of the unloaded septage to settle down to the bottom of tank while the lighter part of septage (i.e. water & oil) remains above. The settled solids (sludge) get thickened in the settling-cum-thickener tank and removed by pumping at regular interval to the sludge drying bed for removal of moisture content. The leachate from sludge drying bed is collected in a leachate sump which is pumped to the pre-treatment unit of Sewage Treatment Plant (STP) which is co-located with the Septage Treatment Plant (SeTP) for further treatment and disposal.

Some Facts about the Plant

Details of FSTP

Capacity: 50 KLD

Technology: Solid liquid separation, liquid fraction cotedreated in STP & Solid fraction dewatered in sludge drying bed for further use.

Details of STP

Capacity: 15 MLD

Present flow : 12 MLD

Technology : Aerated Lagoon

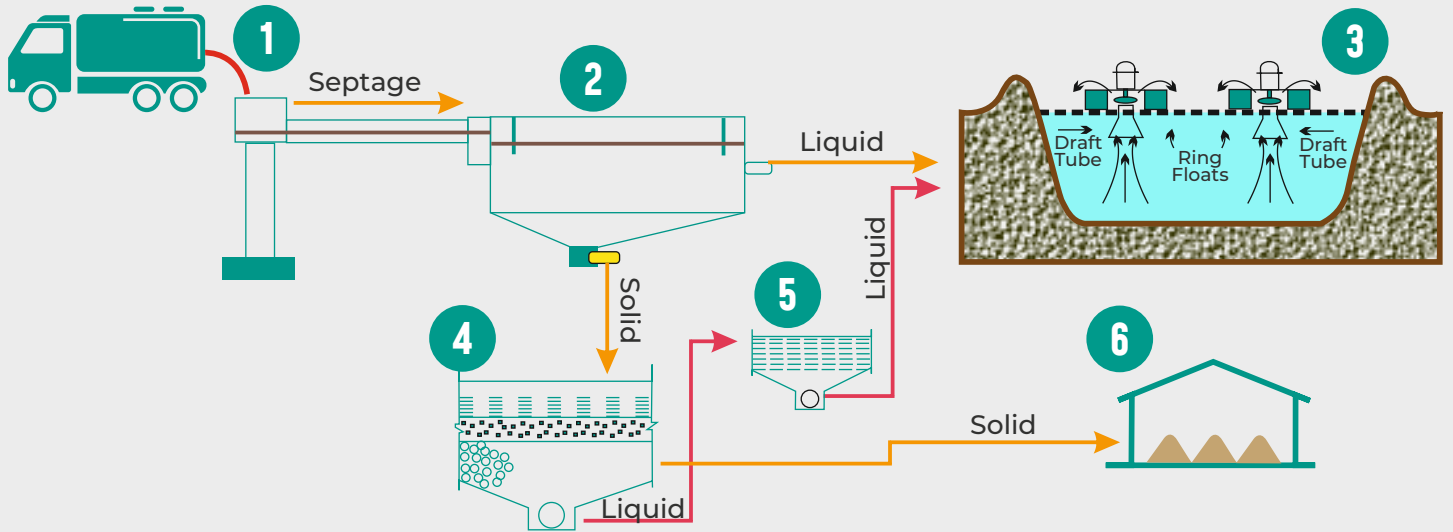
The Municipality have 6 number of cesspool vehicle out of which 4 were procured by the OWSSB and handed over to ULB while the other 2 were procured by ULB. The 4 newly procured vehicle are of 3000 L capacity and have been handed over to the professional agency under the contract.

Current Scenario

As per the Survey conducted by TSU-FSSM, Majority of the residents have never cleaned their septic tanks. This practice of not emptying the septic tanks hardens the sludge within the tank which leads to Manual Scavenging “ A criminal Act”.



Treatment Process Flow Diagram



- 1 Receiving Chamber with screen: Receives septage from cesspool emptier and screens solid waste from septage
- 2 Settler Cum Thickener: Separates solid and liquid fraction from septage
- 3 Sewage Treatment Plant (Aerated Lagoons): Biological oxidation of liquid fraction of septage along with sewage
- 4 Sludge Drying Bed: Used for dewatering and drying of the digested sludge
- 5 Leachate Sump: Collects leachate from Sludge drying beds and transfer to Aerated lagoons
- 6 Sludge Storage Yard: Collects and stores treated sludge from drying bed for disposal/composting

CAPTURE

CONTAINMENT

EMPTYING

TRANSPORT

TREATMENT

SAFE REFUSE
OR DISPOSAL





Faecal Sludge and Septage Management in Puri



ORISSA WATER SUPPLY & SEWERAGE BOARD (OWSSB)

ST. MOTHER TERESSA ROAD, SATYA NAGAR, BHUBANESHWAR, ODISHA - 751007