



Company: Sabesp, Itapetininga
Brazil

Description: 20.000 m² and 1.5 m deep
facultative oxidation lagoon

Problem Description: In June 2012, the Brazilian Public Water company Sabesp decided to install one LG Sonic XXLplus device at their facultative oxidation lagoon in Itapetininga. The BOD removal from the waste water constantly varied and the pertinent growth of unwanted algae needed to be tackle.

Waste Water Oxidation Lagoon

Before treatment

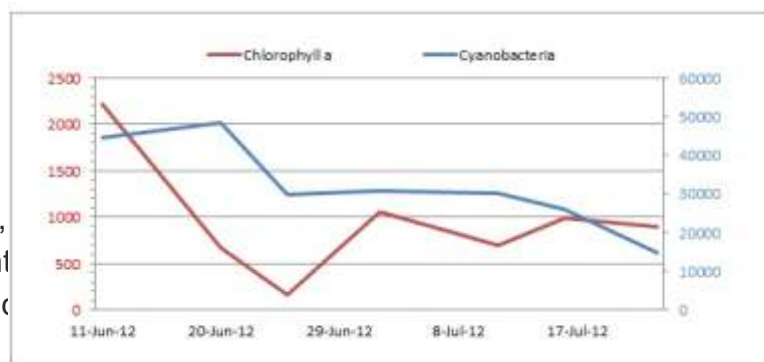
Nuisant odours caused by periodic occurrence of excessive quantities of filamentous, and blue-green algae were posing operational problems at the facultative lagoon in Itapetininga, state of São Paulo. This group of algae which flourishes in this kind of lagoons during the summer months does not settle like green algae but floats and accumulates at the surface where it decays in the sun, giving off noxious odors. Moreover, suspended solids were difficult to remove due to the high concentration of algae, thus posing a pollution threat to the receiving water body.



Photo 2:
Facultative lagoon treated by the LG Sonic technology.

After treatment

Water samples were taken weekly to assess the evolution of the algal population. The laboratory of Sabesp monitored the phytoplankton in the water in terms of chlorophyll-a and cyanobacteria concentration (micrograms per liter). Results are evident just after 2 weeks treatment. After 2 months, the results showed a significant reduction of pigment concentration in the effluent that could be discharged safely into the nearby surface water.



Results

- Up to 80 % reduction in Cyanobacteria concentration
- Up to 60% reduction in Chlorophyll a concentration
- Indirect improvement of adjoining river and waterways overall quality.