

EcoFlush for sediment removal in sewage sedimentation pond in Aguas del Valle

Product: EcoFlush
Location: Vicuña, Chile

Trial setting: Municipal sewage plant

Objective

To reduce organic sediments accumulated at the bottom of sedimentation ponds.

Location description

The sedimentation lagunes at the municipal sewage treatment plant Lagunas del Valle, located in Vicuña, Chile, were filled with organic sediments. The lagoons are 1.8 m. deep, and the layer of mud reached approximately 1.5 m of height allowing only a layer of 0.3 m of water on the surface. It is expected for each lagoon to have a minimum of 10,000 m³ sediments and a flow of 25 liters per second (2,160 m³ per day).



Methods

Because of the proximity of the sedimentation lagoons to the residential areas, dredging was not considered to avoid the increase in bad odors it would produce. For this reason it was decided to try biological degradation of organic sediments using EcoFlush.

In order to carry out this trial a mesocosm was built (a large aluminum box with an area of one square meter and a height of 2 meters with two open ends). The box was carefully submerged with one open end directed towards the bottom of the pond making sure the sediments were not disturbed. The accumulated sediments inside the box reached 1.5 meters. A solution of 600 grams of EcoFlush was added. The ambient temperature was between 3 and 16° C (37 and 61° F). The trial was carried out by engineer Alberto Alday Pantoja, Cultivos Ecológicos y Protección Ambiental CEPASA, SA. Lota 2267 oficina 206, Providencia Santiago Chile. Phone: 56 2 231 1112





Addition of EcoFlush diluted in water

Results

Four days after the treatment the sediment column had decreased by 20% from 1.5 meters to 1.2 meters in height, demonstrating the quick and effective sediment degradation process at low temperatures with EcoFlush, even though this was not the product recommended for use at low temperatures. We recommend EcoFlush COLD for temperature ranges between 2 and 25°C (35 and 77°F), and EcoFlush for temperature ranges between 25 and 42°C (59 to 108°F).