



## **EFFLUENT TREATMENT MOBILE UNITS**

**BIOMOBIL® - TANK process**

Temporary biological  
treatment solutions to boost  
the capacity of existing stations





Tanks x 2 (Biomobil® - Tank) aeration completed with a flotation clarification solution (Aeromobil®)

## CONTEXT

**A world leading sugar producing company trusted CTP environnement's expertise in the treatment of effluents with mobile units implemented at several sites.**

The client's treatment plants were deemed to be undersized. They were required to treat higher carbon and/or nitrogenous loads with increasing volumes.

The client selected CTP environnement to provide mobile effluent treatment units to complement - or operate in parallel depending on the site - existing treatment plants.

## CHALLENGE

**The innovative process proposed by CTP environnement was adapted to the specificities of each site, with the implementation of 3 types of solutions.**

### Aerated tank + flotation

Installation of a biological unit Biomobil® - Tank combined with an Aeromobil® air-dissolved flotation unit to treat in parallel the existing WWTP, 50 m<sup>3</sup>/h (220 gpm) of effluent with high level of organic contamination (COD, BOD5, NGL).

### Agitated tank with or without recirculation

Installation of a Biomobil® - Tank to complement the existing WWTP: high performance on nitrogen removal keeping the 800 m<sup>3</sup>/h (3520 gpm) circulation between the client's aerated tank and the CTP environnement's agitated tank.

### Sequencing biological phases treatment tank

Setting up of a biological unit Biomobil® - Tank to treat in parallel the existing WWTP, 50 m<sup>3</sup>/h (220 gpm) of effluent with high level of organic and nitrogenous contamination

## SOLUTION

With its Biomobil® - Tank unit, CTP environnement proposed a turnkey solution including:

- Preliminary studies with laboratory tests,
- Detailed studies and supervision of preparation work
- Installation & start-up,
- Training of the client's operating teams,
- Remote monitoring with regular site visits for preventive maintenance,
- Demobilisation





Existing aeration tank and connection to mobile CTP environment units (Biomobil® - Tank)

## KEY FACTS

### Performance

Once commissioned and started up, 100 % of reliability

### Treatment operation

7/7 days & 24/24 hours

### On site shift follow-up

1/2 h/day for 5/7 days

### Treatment flowrate

Between 40 & 70 m<sup>3</sup>/h

(176 & 308 gpm)

### Tailor-made automatism

Customised setting up of remote control with alarm notifications

### Unit volumes

650/850/1200/1400 m<sup>3</sup>  
as required

(845/1105/1560/1820 yd<sup>3</sup>)

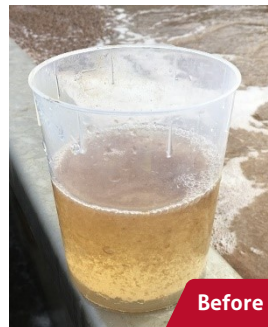
### Aeration capacity

From 100 to à 200 kg O<sub>2</sub>/h

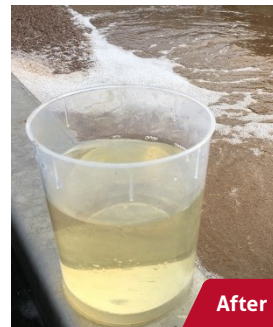
(220 to 440 lb)



Aerated tank diffusers



Before



After

## RESULTS

CTP environnement performed the treatment of the effluents in compliance with environmental standards, matching highest safety standards within the industry and following specific rules to each site.

The cost effectiveness, the timeline of the project, as well as the level of objective to be reached for each site had to be taken into account within the definition of each solution.

These 3 projects were successful:

- With > 99 % of the COD and BOD<sub>5</sub> load treated
- With > 99.9 % removal efficiency on TSS (with the use of Aeromobil®)
- Reduction of the total nitrogen level in the discharged water down to < 30 mgN/l
- 100 % compliance of treated water discharged into the environment

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