

WWTP Mongstad



Project objectives

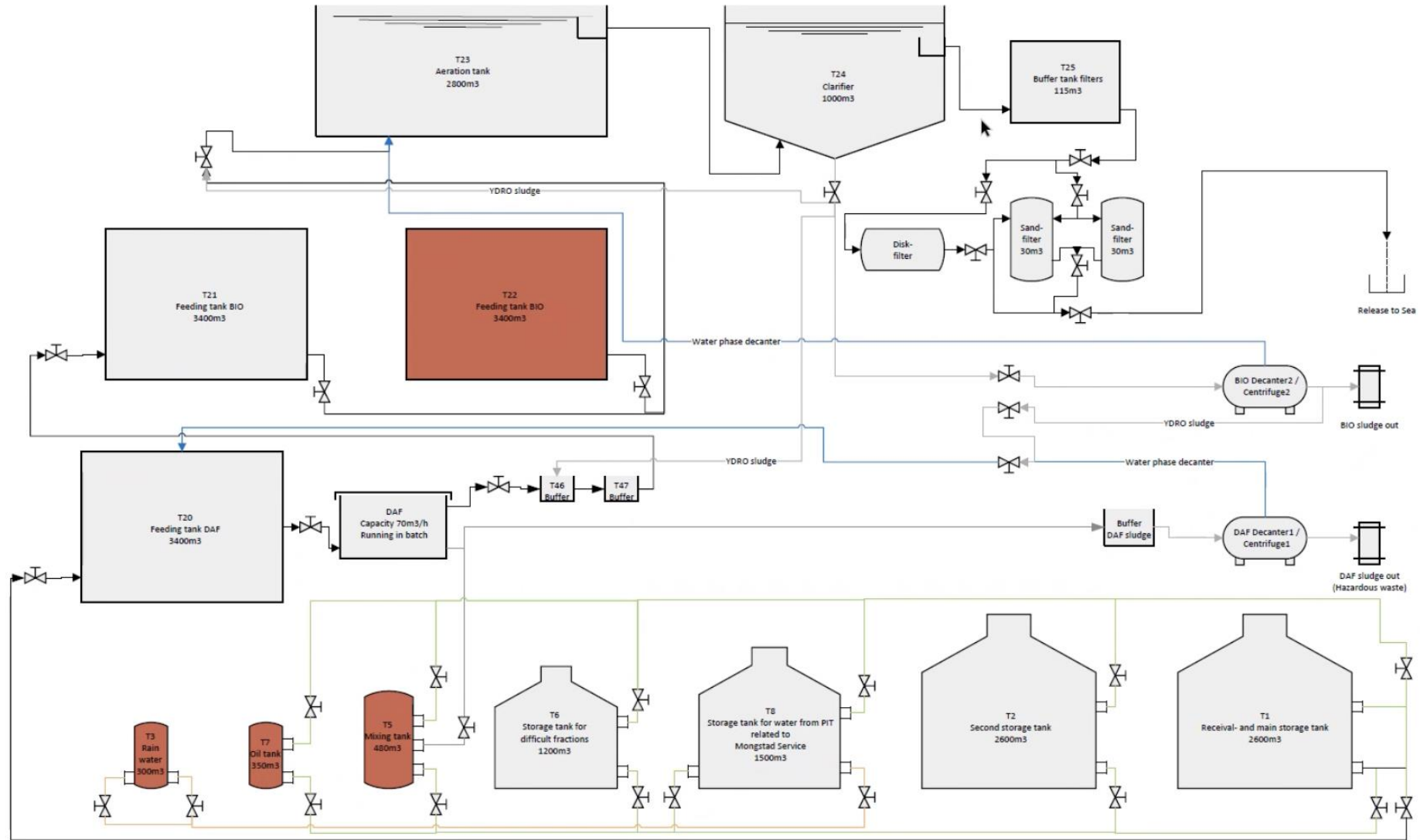
Characteristics	Data
Population equivalent	100.000
Type of treatment plant	Classic
Design capacity	4,000 m3/day
Flowrate (average flowrate during 12 months)	300 - 500 m3/day

PROJECT OBJECTIVES

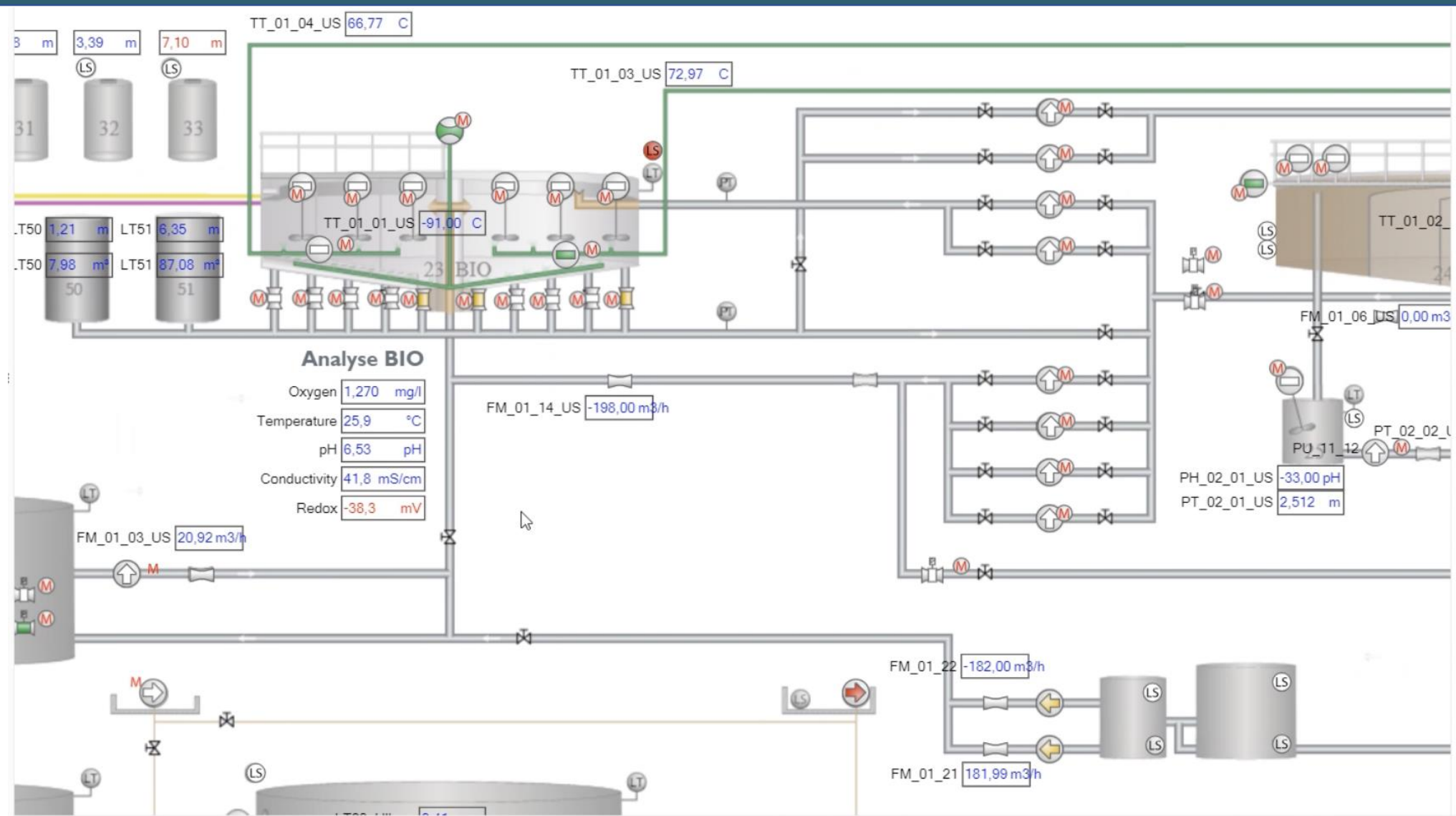
The main objective of the proposal is to assess the potential technical and economic benefits of Ydro Process® technology in the selected WWTP:

- Evaluation in the potential decrease in production of the total excess sludge (for disposal) by 50% or more of the existing amount;
- Evaluation of the impact on the performance of the WWTP in terms of effluent quality and energy consumption;
- Elimination of odours (H₂S);
- Preliminary assessment of economic benefits.

WWTP Diagram



WWTP Diagram



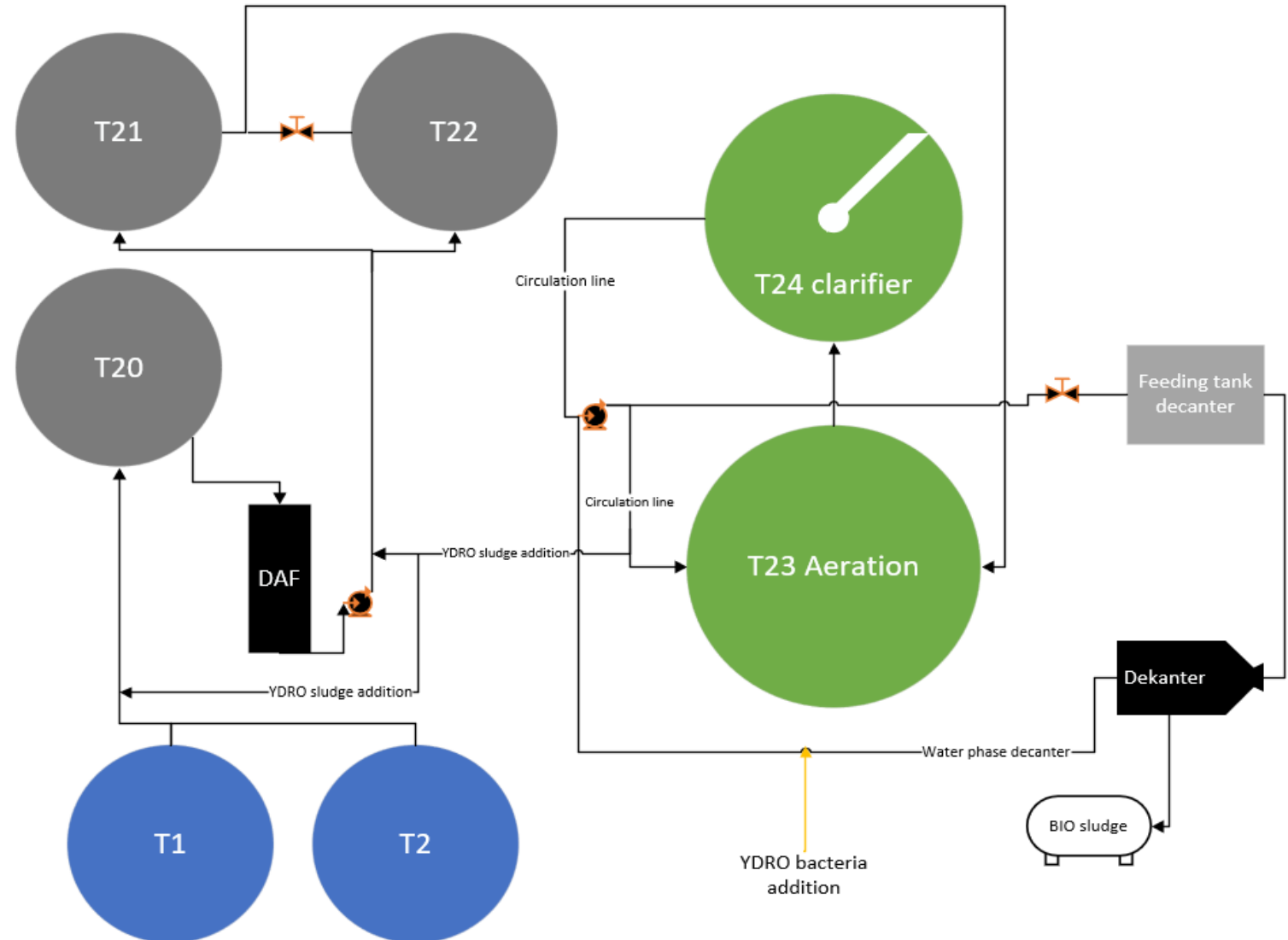
Project specific operations

Surplus waste activated sludge (WAS) from T24 (clarifier) diverted to Storage tanks T20, T21 and T22 (15-30 m³/day) to retain Ydro Microorganisms® in the system and to achieve impact (hydrolysis) on the primary sludge in the Storage tanks.

Ydro Microorganisms® dosing point: T23 Aeration 1.44 kg/day (first months q-ty is double 2.88 kg/day).

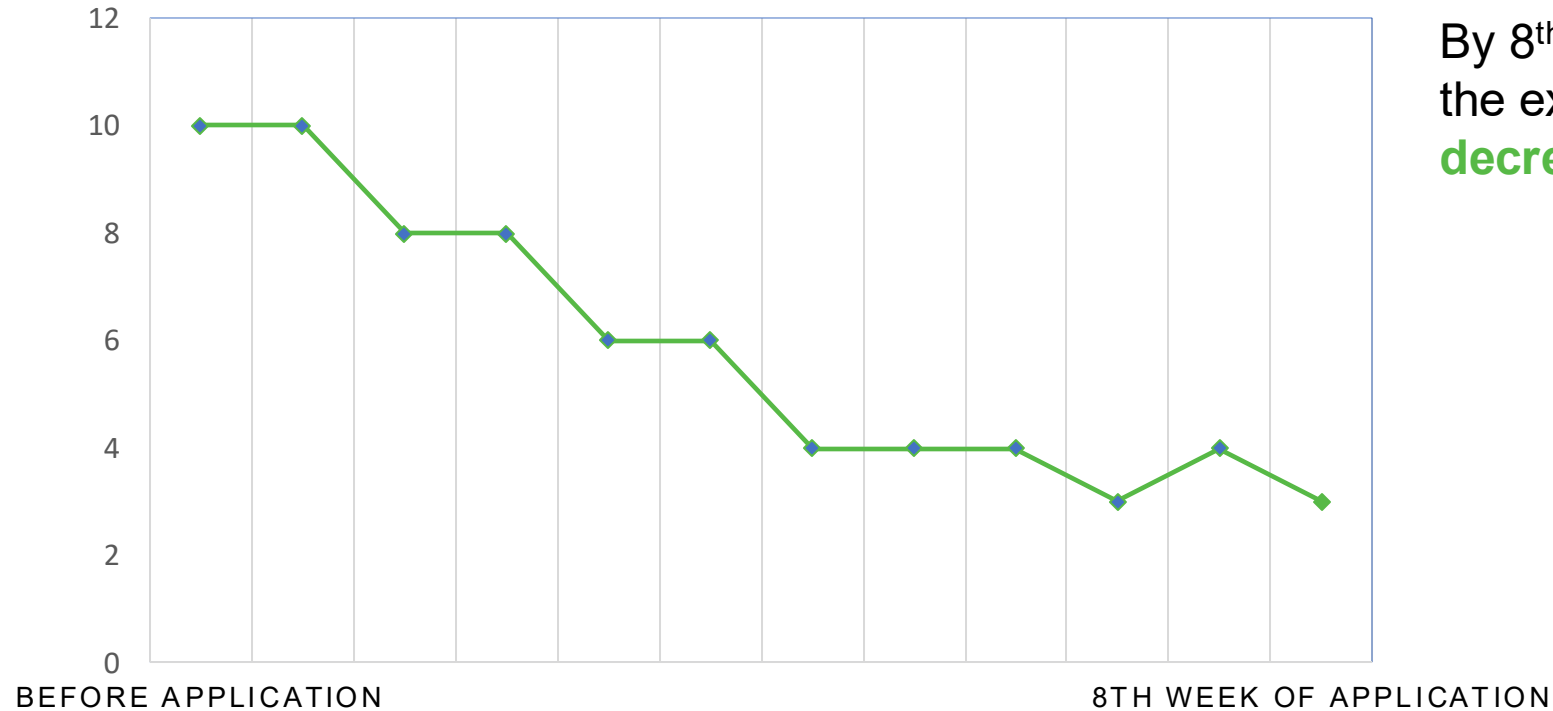
Ydro Microorganisms® maturation time: 12-16 hours.

Ydro Microorganisms® dilution rate: 1:10.



The **reduction** of the excess sludge

Excess sludge for disposal 70% water content



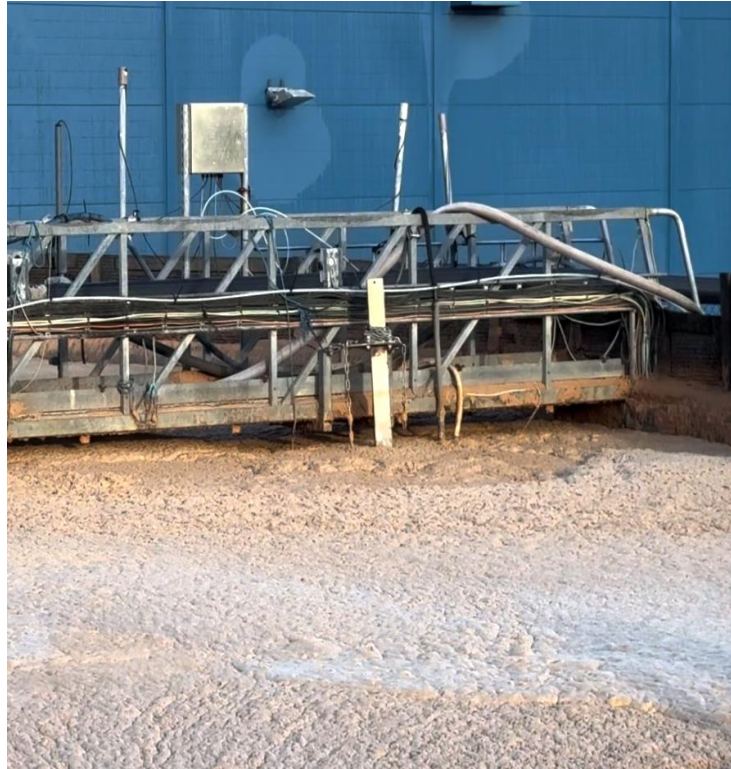
By 8th week of Ydro® application the excess sludge production **decreased** for more than **60%**.

T23 Aeration

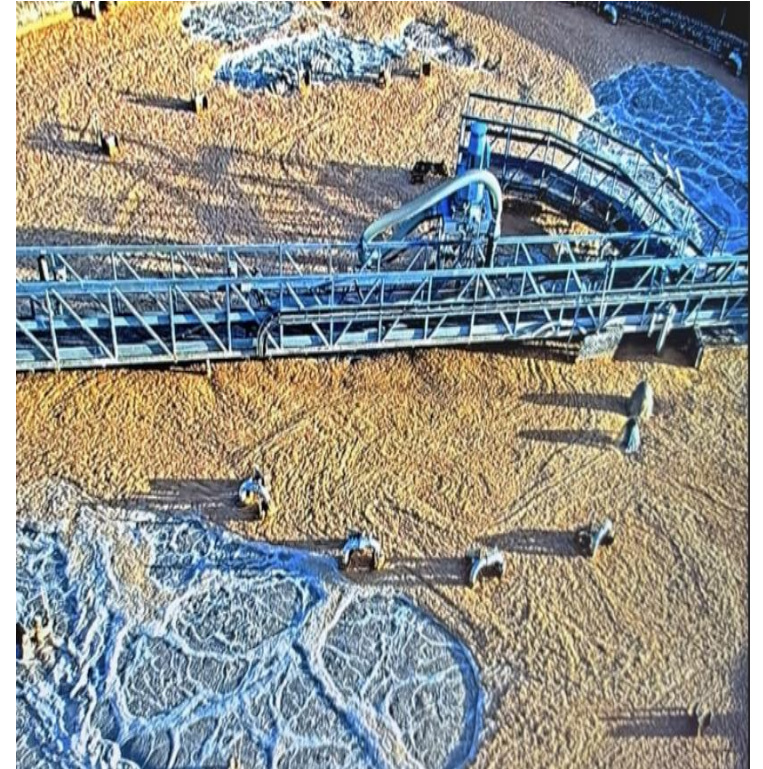
Before Ydro application
12.12.2023 foam is very high



30.01.2024
MLSS and foam decreasing



April 2024
MLSS and foam decreasing further

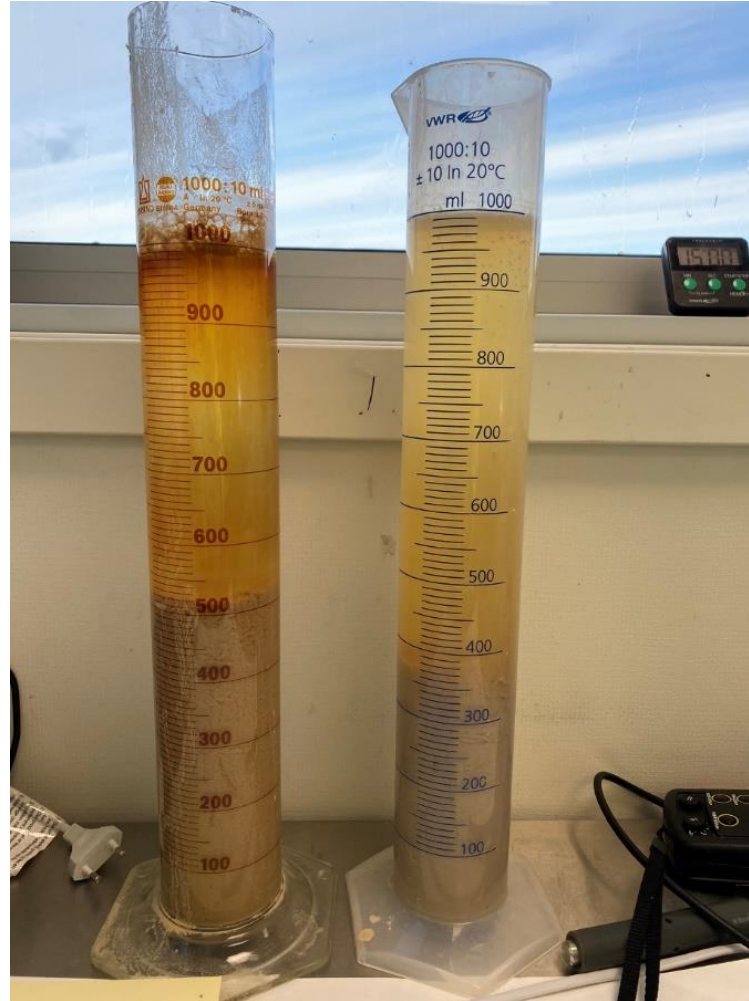


Sedimentation

Before



After



As shown in the picture, we see much better sedimentation capability in the system with the use of Ydro® Microorganisms.

T24 Clarifier

Before: 12.12.2023
(turbidity high > 250 NTU)



After one month
(turbidity decreasing < 200 NTU)



September 2024
(turbidity decreasing < 100 NTU)



Results



Effluent parameters

within allowed limits, turbidity decreasing further and sand filters perform better



Substantial odor reduction

H₂S eliminated



Excess sludge reduction

sludge for disposal reduced by more than 60%



Ydro Process® application

Client has increased the inflow from 12.5 m³/h to 19 m³/h what leads to economical benefits.

