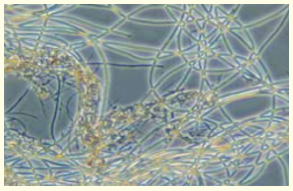
HANSON SOLUTIONS GROUP

BioPro Series

BioPro P&P Improves Performance at Paper Mill Wastewater Treatment Plant

Background

A paper mill wastewater treatment facility plant dosed with BioPro P&P demonstrated improved settling in clarifier, reduced effluent biological oxygen demand and total suspended solids.



Abundant Filaments 100x

The treatment configuration of the paper mill wastewaster treatment facility included an aeration basin that had an anaerobic selector and plug flow configuration. The aeration basin flows to the final clarifier for settling and then to final effluent. The flow rate at the facility was 1 million gallons per day (MDG). The objective of this case study was to improve the performance at the facility with bioaugmentation without making any operational adjustments.

Objectives

To demonstrate treatment with BioPro P&P to:

- Reduce Microthrix parvicella foaming
- Strengthen floc structure
- Improve settling

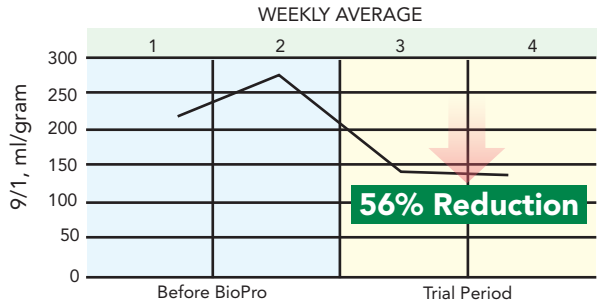
Applications

The system was dosed with 2 mg/L of BioPro P&P in the anaerobic selector once a day for two weeks. Flow rate (1 MGD), temperature (95°F), MLSS concentrations (3000 mg/l) and sludge age (2.5 days) remained consistent. Influent BOD concentration increased by 16% during the case study.

Results

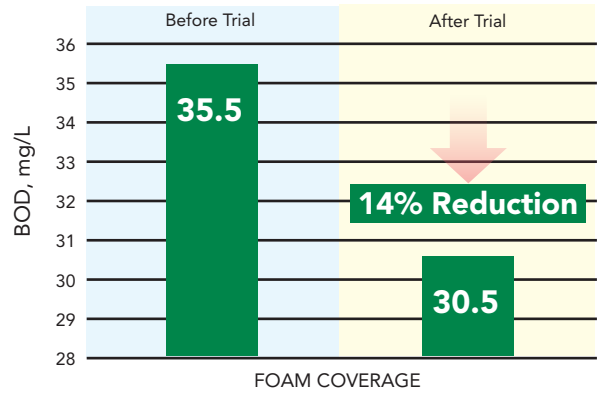
- BioPro P&P addition increased treatment performance and improved settling at the facility even with increased influent BOD loading.
- 56% decrease in SVI (Sludge Volume Index)
- 14% decrease in effluent BOD
- 11% decrease in effluent TSS

Sludge Volume Index



The SVI decreased by 56% after 2 weeks of BioPro P&P application.

Average Effluent BOD mg/L



The average effluent BOD concentration decreased by 14%.