



Accelerated Recovery from Upset in SBRs Treated with BioPro ULTRA vs. Control SBR at Meat Processing Wastewater Treatment Plant

Background

A meat processing facility was a 1.8 MGD (million gallons per day) plant with flow equalization followed by primary DAF, anaerobic pretreatment, three SBRs, and tertiary disinfection. The facility was experiencing surfactant foaming upsets, floating sludge during settling cycle and elevated suspended solids in effluent.

Results from the case study indicated an accelerated recovery in basins treated with BioPro ULTRA. A decrease in surfactant foam, SVI, a return of Protozoa and Metazoan (stalked ciliates, rotifers) and improved floc formation was seen 1-2 weeks sooner in the SBR trains treated with BioPro ULTRA.



Beginning of case study



Two weeks after application

An example of the type of reduction in surfactant foaming that BioPro ULTRA provides in meat processing wastewater.

Objectives

The objective was to demonstrate accelerated recovery in basins dosed with BioPro ULTRA and stay in compliance for effluent TSS (total suspended solids).

Applications

Two SBR trains were dosed with BioPro ULTRA while a third served as a control during the 30-day case study. BioPro ULTRA was dosed to SBRs #1 and #3

while SBR #2 was left as a control. Dosing was increased each week during the 30 day study.

DATE	DOSAGE
Week 1	1 mg/L
Week 2	1.6 mg/L
Week 3	3.5 mg/L
Week 4	5 mg/L

Results

- The surfactant foam decreased 1-2 weeks sooner in the basins where BioPro ULTRA was dosed.
- The SVI decreased one week sooner in the basins where BioPro ULTRA was dosed.
- Protozoa and Metazoan (stalked ciliates, rotifers) returned to the basins sooner where BioPro ULTRA was dosed.
- Floc formation improved and dispersed growth decreased sooner in the basins where BioPro ULTRA was dosed.



Final effluent at start of case study



Final effluent after case study