



Ohio Bakery Reduces FOG in Pretreatment Effluent with MICROBE-LIFT® Technology



Location: Bakery, Ohio

Background: A major full service bakery in Northern Ohio has a pretreatment plant which discharges to the local village wastewater treatment plant. The average daily flow through this plant is 15,000 to 25,000 per day. Influent waste concentration ranges from 6,000 to 100,000 mg/l CBOD; average suspended solids is 6,000 mg/l; and FOG level ranges between 800 mg/l to 1,000 mg/l.

Objective: The waste is treated aerobically in an activated sludge system consisting of two 50,000 gallon aerated tanks in series. The wastewater from the secondary tank is pumped onto a gravity belt with polymers being injected into the waste stream.

The municipality was requiring further reduction of effluent FOG since this causes sewer blockages requiring high maintenance costs.

The bakery needed a mechanism to improve the activity of their system to reduce FOG and organics. MICROBE-LIFT® was selected to enhance biological activity to improve degradation. MICROBE-LIFT® was added to the system with an initial charge of two gallons, followed by one quart per day added for a ten-day period. The maintenance dose was then reduced to one pint per day.

Results Achieved: As a result of this treatment the second aeration tank took on a richer brown color and there was less grease as evidenced by the absence of the grease that used to collect on the paddles of the sludge thickener belt. The plant was able to reduce the usage of sludge-thickening polymer by 70%.

After treatment, the average effluent discharge to the local village POTW was reduced to an average CBOD of <200 mg/l, TSS of 200-400 mg/l, and an average FOG of 15 mg/l or less. Both the bakery and the municipality considered this treatment a dramatic success.

The novel consortium of bacteria in MICROBE-LIFT®/IND enhances microbial action to speed degradation of a wide range of waste organics including the residual hard-to-degrade long chain fatty acids typically measured as FOG. Typically the effects of treating FOG containing waste with MICROBE-LIFT® are quite dramatic.

For more information on MICROBE-LIFT® Technology contact
Ecological Laboratories Inc.
www.EcologicalLabs.com
CS14305