

BIOAUGMENTATION REDUCES FILAMENTS IN FOOD PROCESSING WASTEWATER

BETHLEHEM, PA (March 10, 2000) – Bioaugmentation has reduced filamentous organism growth in a wastewater treatment plant handling potato processing waste resulting in dramatically improved influent suspended solids results.

The small (0.1 MGD) plant, consisting of a primary clarifier, sequencing batch reactors (SBR) and an aerobic digester, was experiencing treatment problems caused by poor sludge settling and structural brown foam. Such problems often occur during extreme weather in treatment plants used by food processors or in municipal wastewater treatment plants receiving food-processing wastes.

Rather than risk a plant upset with harsh chemicals sometimes used to control filamentous organisms, the plant manager chose bioaugmentation with a bacteria/enzyme blend formulated to break down food processing wastes and displace filamentous types of microbes by destabilizing and out competing them. The biological product applied, MICROCAT®-XF Filament Controller contains bacteria, enzymes and other ingredients that destabilize filamentous organisms reducing their propagation rate relative to the other microbes present in the system.

After beginning bioaugmentation in the SBRs, the mixed liquor was examined weekly under a microscope. Decreased levels of filamentous bacteria were observed after one week, confirmed by improved sludge settling, reduced total suspended solids in the effluent (see Figure 1) and reduced waste activated sludge. The brown stable foam generally associated with *Nocardia* filaments was eliminated after three weeks.

After the initial dosage, bioaugmentation was reduced to a maintenance level without recurrence of filamentous bacteria. Continued microscopic examination has revealed the increasing presence of higher life forms, such as rotifers, indicative of a healthy biomass.

For further information about this application, contact Bioscience, Inc., 1550 Valley Center Parkway, Suite 140, Bethlehem, PA 18017, 800-627-3069, fax 610-691-2170, e-mail bioscience@bioscienceinc.com.