

## PROBIOTIC SOLUTIONS® Potato Waste and Solids Wastewater Treatment

CASE STUDY

Location: Pennsylvania

### Problem

A wastewater treatment in Pennsylvania was experiencing process control problems when new potato waste stream flows increased by 26% to 180,000 gallons per day (GPD). The additional load was causing filamentous issues in the sequencing batch reactor (SBR), settlability problems, and increased sludge hauling costs.

The engineer was unable to maintain the 8-foot decant level in the sequencing batch reactor (SBR). He couldn't decant more than 2–3 feet under the excess load.

The facility is designed to accept 150,000 gallons of industrial waste stream daily. The SBR final effluent is discharged to a municipal wastewater facility. Their sludge is applied to farmland.

### Solution

An initial dose of ½ gallon of BIO ENERGIZER® was batch fed into each of 2 SBRs during the low mode for a total of 1 gallon per day. Within 1 week, operators were able to decant 8 feet of supernatant from each SBR. This dosage rate was maintained until the factory use of stored potatoes increased starches and residual BOD in the wastewater. When that occurred, the dosage rate of BIO ENGINEER® was increased to 2.5 gallons per SBR in low mode for a total of 5 gallons per day.

### Results

Microbial activity increased in SBRs. As a result, the filamentous bacteria and foaming abated. Settleability went from 3–4 feet to 12–13 feet in 2 days and maintained those levels with the BIO ENERGIZER® addition. The decanting problem was resolved. Sludge disposal costs reduced by 30% within the first 2 months, saving the plant \$24,000 over 2 months.

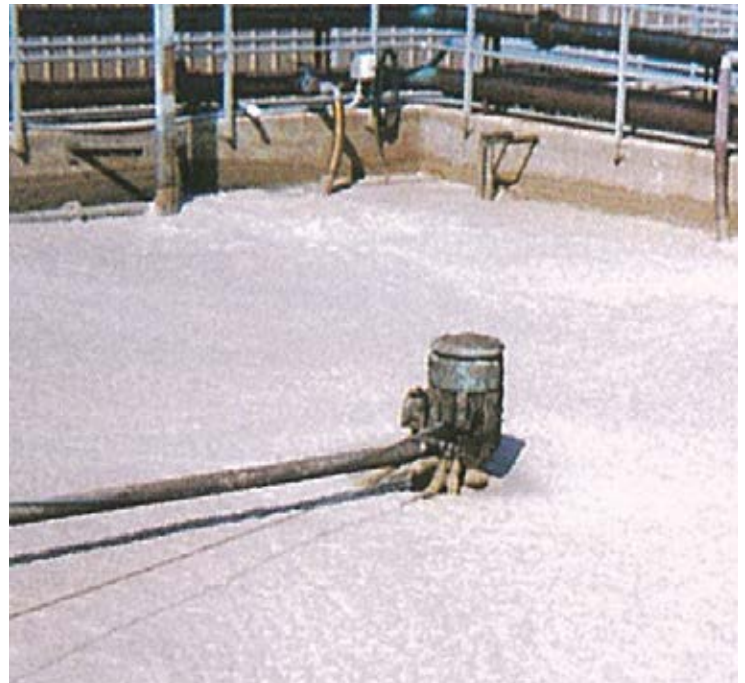
### Conclusions

Probiotic Solutions® BIO ENERGIZER® applied over a period of 2 months to an industrial wastewater treatment plant overwhelmed by new potato waste resulted in increased microbial activity, reduced filament and foam, improved decanting, reduced accumulated sludge and sludge hauling costs.

### Product Information

Probiotic Solutions® BIO ENERGIZER® is a formulation of nutrients, organic acids, natural biological stimulants, and energy systems that balance the natural microbial ecosystem to increase bio-oxidation capacity in lagoon systems. BIO ENERGIZER® is a broad-spectrum bio-activator containing over 30 essential microbial growth-promoting ingredients.

Wastewater facility operators have been using BIO ENERGIZER® for many years to cut their sludge-hauling costs. For more information, go to [www.probiotic.com](http://www.probiotic.com).



## Probiotic Solutions® Product Information

For many years, wastewater operators have continued to use BIO ENERGIZER® to cut sludge hauling costs.

BIO ENERGIZER® is a broad-spectrum bio-activator containing over 30 essential microbial growth-promoting ingredients. By design, BIO ENERGIZER® is a balanced formulation of vitamins, trace nutrients, enzymes, organic acids, and biostimulants that stimulate the existing microbial community to greater metabolic capacity and efficiency. BIO ENERGIZER® is not a bacterium nor an inoculum.

For more information, go to [www.probiotic.com](http://www.probiotic.com).

### Operators Using BIO ENERGIZER® Report:

- 1) Increases in BOD removal efficiency.** BIO ENERGIZER® improves treatment plant BOD removal efficiency to increase plant treatment capacity and more easily meet effluent requirements.
- 2) The elimination of expensive dredging costs.** BIO ENERGIZER® converts sludge into gases and water, reducing sludge accumulations. No draining, drying, excavating, or inconvenient down time.
- 3) The reduction of odors and aeration costs.** BIO ENERGIZER® enhances aerobic and facultative biological ecosystems to reduce the production of objectionable and offensive odors and enhances dissolved oxygen levels, which decreases the need for aeration.

**BIO ENERGIZER® enhances endogenous respiration for faster and more complete oxidation of sludge into carbon dioxide and water.**



## Our Probiotic Solutions® Products

Are Highly Efficient and Effective Due to Our Unique Delivery System

Call Toll-Free Today for Your Free Quote and System Evaluation.

**1 (800) 961-1220**