

Sludge Reduction in Cold Weather using BIO ENERGIZER®

FIELD REPORT

Location: Wastewater Treatment Plant, Wisconsin

Profile

Location: Wisconsin
 Population: 947
 Lagoons: 2 lagoons, 0.75 acres, 14 ft. deep
 Flow: 50,000 gpd

Project Summary

The plant operator noticed a buildup of sludge in the treatment plant lagoons and wanted to prevent the need for future dredging, as the costs for dredging were cost prohibitive to the City. With the onset of cold winter weather there was also a need to increase the microbial population to help manage BODs and increase sludge reduction.

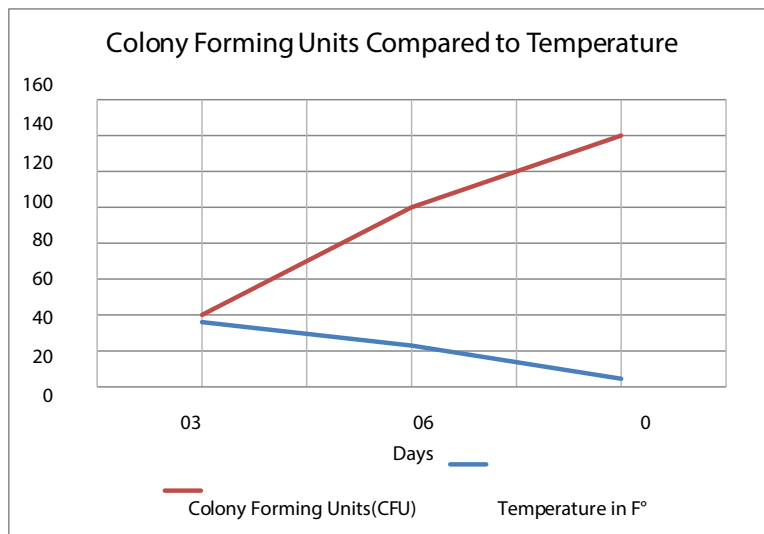
Situation

About 20 inches of sludge had accumulated in the first lagoon of the treatment plant. In October, the plant operator decided to begin using BIO ENERGIZER®, a biological activator that accelerates the natural oxidation of sludge into harmless carbon dioxide and water. With cooler weather, temperatures dropping to at or below freezing, there was a concern that the existing microbial population in the lagoon would not be able to adequately reduce incoming bio-solids/BODs and prevent further development of the sludge blanket.

Solution

A 60 day trial was proposed to use BIO ENERGIZER® to biologically oxidize their sludge while the lagoons remained on line, as well as quantify the changes to the microbial population. A baseline sample of the effluent was sampled and analyzed by a certified laboratory. In the first sample, 40 colony forming units (CFU) were found. The plant operator then began adding BIO ENERGIZER® at the recommended start up dose of 7 parts per million (ppm) for 30 days, (November) at the end of which another effluent sample was taken.

The result of the second sample was that their Colony Forming Units (CFU) in the effluent had increased from 40 to 100 CFU. The dosage of BIO ENERGIZER® was then reduced to the typical 5 ppm and a sample was collected after another 30 days (December). The result of the second sample showed further increase up to 140 CFU in the effluent. After 60 days, the increase of the microbiological population increased 350% despite the colder winter temperatures. The plant operator also stated that the effluent clarity had increased in his system and has decided to continue using BIO ENERGIZER® in the facility.



Probiotic Solutions® Product Information

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 motivate the existing microbial community to greater metabolic capacity and efficiency. BIO ENERGIZER® is not a bacterium nor an inoculum.

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

Operators Using BIO ENERGIZER® Report:

- 1) Increases in BOD removal efficiency.** BIO ENERGIZER® improves treatment plant 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 eco-systems to reduce the production of objectionable and offensive odors. BIO ENERGIZER® also increases the 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**

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Quote and System Evaluation.*

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