Up to 85% Solids Destruction Achieved Using BIO ENERGIZER®

Field Report

Location: Wastewater Treatment Plant, Missouri

Project Summary

The operators at the city of Missouri wanted better digesting performance. They needed a better settling sludge along with a higher volume of decants as well as more room to waste sludge within their existing digesters. The options to dispose of the digested sludge were becoming more and more scarce. In addition, once the temperature drops they are unable to land apply the solids. In addition to the scarcity of disposal options, the costs continued to rise.

Solution

After hearing what BIO ENERGIZER® is doing for enhanced solids destruction and better settleability in other digesters across the country, they decided to use BIO ENERGIZER® in their own digester to see what would happen. The City conducted a side-by-side test comparing BIO ENERGIZER® and two other products to determine which product was most cost effective based on the results obtained. After the trial period was completed, BIO ENERGIZER® provided the best results specifically reducing the total solids in the digester at a very economical price. BIO ENERGIZER® was the clear winner amongst the three products tested.

The City is very pleased with the results of using BIO ENERGIZER®. They actually have seen a significant improvement in settling as well as a significant reduction in the total solids in their digesters. They have achieved up to 85% volatile solids destruction using BIO ENERGIZER®. This reduction in solids has led to numerous cost savings. The reduced volume of solids means less hauling from the plant leading to reduced acreage required for solids disposal, which leads to much lower operational costs. These lower costs also include reduced man-hours by an already short-handed staff.

Another benefit that the City has gained is increased decant volumes. The City has doubled the number of decants by using BIO ENERGIZER® than previously experienced with other products. One decant comes from the digesters after settling and another decant from the holding tank prior to haul off to a disposal location. These improvements from using BIO ENERGIZER® have provided greater digester capacity and more sludge storage, better settleability and increased decants, and better overall aerobic digester operation.

Below is a graph, which clearly shows the enhanced volatile solids destruction (up to 85%) that BIO ENERGIZER® provided to the City in their digesters, which is a huge improvement over the normal operation without BIO ENERGIZER®.
**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.

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**Our Probiotic Solutions® Products**

are Highly Efficient and Effective Due to Our Unique Delivery System

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