



## Results Using BIO ENERGIZER® to Reduce Pond Odors and Sludge Levels Golf Course in Arizona

### Problem

Wastewater effluent from an Arizona city's wastewater treatment plant was pumped to a municipal golf course at a rate of 1 million gallons per day and used to water the golf course's greens, trees, and shrubbery. Over the years, septic conditions had built up in the lagoon system causing complaints of objectionable odors, particularly when the lagoon was drawn down by irrigation.

### Treatment

14 weeks of treatment with **BIO ENERGIZER®**

### Outcome

After treatment, the superintendent reported that the odor was reduced to the point that the exposed sludge did not have an objectionable odor when the lagoon was drawn down by irrigation. In addition, core samples lifted to the surface and examined also showed no signs of odor. Of greater significance, the superintendent noted that **BIO ENERGIZER®** had reduced sludge levels by over 55 percent.

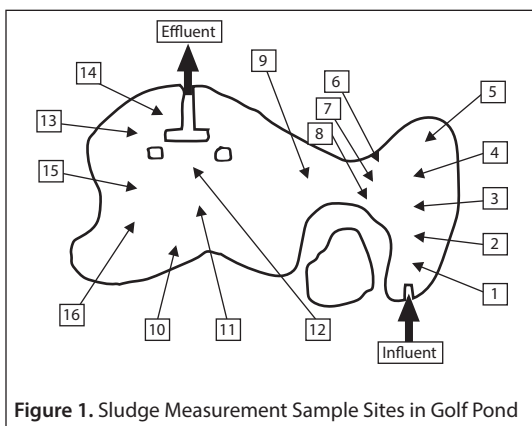


Figure 1. Sludge Measurement Sample Sites in Golf Pond

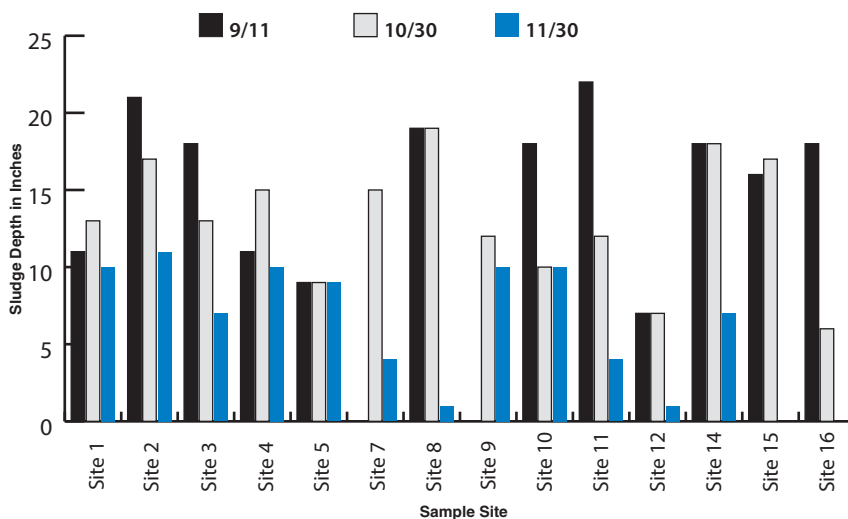


Figure 2. Sludge Depth in Inches by Sample Location and Date of Sample

Table 1. Sludge Depth in Inches by Sample Location and Date of Sample

	9/11	10/30	11/30
Site 1	11.0	13.0	10.0
Site 2	21.0	17.0	11.0
Site 3	18.0	13.0	7.0
Site 4	11.0	15.0	10.0
Site 5	9.0	9.0	9.0
Site 7	0.0	15.0	4.0
Site 8	19.0	19.0	1.0
Site 9	0.0	12.0	10.0
Site 10	18.0	10.0	10.0
Site 11	22.0	12.0	4.0
Site 12	7.0	7.0	1.0
Site 14	18.0	18.0	7.0
Site 15	16.0	17.0	0.0
Site 16	18.0	6.0	0.0
<b>Totals</b>	<b>188.0</b>	<b>183.0</b>	<b>84.0</b>

**Total Sludge Reduction Over the Sampling Period Was 104.0 inches, a 55 Percent Reduction.**

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## Product Info

**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 bio-stimulants 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 ecosystems to reduce the production of objectionable and offensive odors and enhances dissolved oxygen levels. **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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PROBIOTIC SOLUTIONS® Products Are Highly Efficient and Effective  
Due to Our Unique Delivery System



Call Toll-Free Today for Your Free Pond Evaluation and Sludge Removal Quote:

**1 (800) 961-1220**