ECO Bionics® BIO-Amp™ Solves Wastewater Odor Problems at Rendering Plant

**Problem**
A contract rendering plant in the Southeastern U.S. was experiencing severe odor problems with a zero discharge wastewater treatment system.

Approximately 45 gpm of plant wastewater was processed through a dissolved air flotation (DAF) unit and then a series of two lagoons. The first lagoon acted as a settling pond. The wastewater in the second, aerated lagoon was heated by circulation through a large heat exchanger. This eliminated discharge by causing the water to be vaporized in the aeration process. Although the plant applied large amounts of a liquid bacteria product, odor complaints from the surrounding area were a major public relations problem. Also, over time a majority of the first lagoon became covered with a 6”-8” crust of grease. This posed the threat of a major cleanup and disposal problem.

**Solution**
The plant installed one BIO-Amp unit feeding into the aerated equalization tank prior to the first lagoon. The BIO-Amp is a compact, automated system for economically growing and applying high levels of bacteria that will degrade the carbohydrates, grease, oils, and other organic matter present in wastewater streams. A single BIO-Amp unit pumps 31 trillion live bacteria into the wastewater system every day.

After six weeks, daily application of bacteria from the BIO-Amp had virtually eliminated the odors associated with the wastewater system and the solid grease in the first lagoon began breaking up. Over the course of a year, the bacterial action had digested most of the solid grease buildup. It was also observed that the wastewater treated by the BIO-Amp was less likely to foam and the bacteria were more resistant to upset conditions, like what occurs during an aerator outage.

For this rendering operation, the BIO-Amp proved much more effective and economical than the liquid bacteria product. It improved results, eliminated a serious public relations problem, and reduced operating costs by $600 per month.