



City of McGregor, Texas
Sludge Reduction in an Extended Aeration Wastewater Treatment Plant

The Problem

The City of McGregor, Texas has an extended aeration wastewater treatment plant consisting of a 1.1 million gallon oxidation ditch and two clarifiers. There are four (4) large sand filtered drying beds which must be cleaned manually. Although the plant is operating within permit, the City was concerned about excessive sludge and grease. Sludge records indicated the operator had been consistently wasting between 600,000-700,000 gallons of sludge per month. The plant has a daily flow of about 0.650 million gallons or about 60% of the design flow.

The Treatment Process

Treatment began with a shock dosage of one gallon of BYO-GON PX-109® added to the oxidation ditch. For the first 10 days the operator added 32 ounces by pouring BYO-GON PX-109® into the headworks of the plant. For the next 20 days the dosage was reduced to 16 ounces followed by the addition of 12 ounces of the remainder of the sixty day test period.

Solids tests were conducted on the mixed liquor to determine total solids and volatile suspended solids before and after the introduction of BYO-GON PX-109® with the following results:

Initial Sample	Second Sample
MLSS: 5542 mg/l	MLSS: 3880 mg/l
MLVSS: 3192 mg/l	MLVSS: 2630 mg/l

With the sustainment dosage of 17.5 ounces of BYO-GON PX-109®, the City now has a sustained wasting rate of approximately 100,000 gallons or one bed of sludge per month.