



**Port Neches, Texas**  
*Anaerobic Digester increased performance and volatile solids reduction*

Prior to application of BYO-GON PX-109®, this facility had a historical Total Solids (TS) content of 4.8% and a Total Volatile Solids (TVS) content of 2.3%. A project was developed with the Assistant Public Works Director targeting sludge reduction within the anaerobic digester and increased volatile solids reduction.

At the beginning of product application, the TS was 5.1% and the TVS was 2.5%. A month later, the TS had dropped to 2.6% and the TVS to 1.3%. Within four months the TS had dropped to 2.4% and the TVS to 1.4%. Six months from the start date, the TS results were 2.1% and the TVS results were 0.8%, with water in the secondary digester. Sludge removal costs were reduced for the facility, with hauling reduced from 5 to 2 times per week.

<b>Time Period</b>	<b>Total Solids</b>	<b>Total Volatile Solids</b>
<b>Start Date</b>	5.1%	2.5%
<b>1 month</b>	2.6%	1.3%
<b>4 months</b>	2.4%	1.4%
<b>6 months</b>	2.1%	0.8%

Total solids reductions of 59% were observed during this project, but more importantly, organic destruction efficiency increased from 52% to over 62% in the digester. The six month 38% volatile solids content of the digested sludge is reflective of a healthy anaerobic digester performance. Better performance leads to far less solids removal from the digester, better compaction and less foam, and far superior supernate quality returning to the wastewater treatment plant. Plant savings in reduced dewatering polymer to produce a higher solids sludge cake were also realized.