

## Ken's Foods, Inc.

**Challenge:** Ken's Foods of Marlborough, MA, a large-volume food manufacturer of salad dressings and marinades, had been experiencing rapid growth and, after adding new production lines, needed to quickly upgrade the treatment system to accommodate the increased wastewater flows and improve processing its high-organic content effluents, which contained high fat, oil and grease (FOG).



**Solution:** The solution for Ken's Foods was a design/build effort by Dutchland and ADI Systems Inc. which incorporated a Dutchland precast post-tensioned concrete tank and a unique treatment process called ADI-AnMBR (anaerobic membrane bioreactor). The anaerobic MBR utilizes submerged membranes for biomass retention and solids liquid separation.

**Project Schedule:** Dutchland was contacted in 2007 and within 6 months, designed, manufactured and constructed the precast tank for the AnMBR system.

**Results:** Since its installation in 2008, it has been producing an effluent that is almost devoid of suspended solids, with a chemical oxygen demand (COD) removal of 99.4%, discharging 100,000 gallons of wastewater per day into the municipal system.



2.3 MG (BVF) anaerobic digester installed by Dutchland for Ken's Foods in 2000

As part of the system upgrade, the previous installed low-rate anaerobic reactor was retained to operate as the reactor portion of the new AnMBR. As a byproduct, the combined system is producing 200,000 to 300,000 cubic feet of biogas per day. The biogas has been captured to provide 100% of the wastewater treatment plant's heating requirements, with enough residual biogas to power more than 50% of the Ken's manufacturing facility.