

Case Study #14

- Client Category:** Food processing and packaging plant
- Location:** Pennsylvania, U.S.A.
- Physical Plant:** Two 5,000 gallon alternating holding tanks from one small section of the entire plant.
- Flow:** 20,000 GPD average, seasonal.
- Problem:** Extremely high BOD (35,000 mg/L average).
Elevated TSS (3,500 mg/L average).
Extremely high temperature (165°F. average).
Overall plant waste stream BOD > 5,000 mg/L average.
- Previous Treatment:** Sodium hyperchloride was used at the rate of 100 gallons per 3,000 gallons of waste.
- Previous Results:** Sodium hyperchloride treatment reduced BOD to an average of 10,000. A backup of the system the previous year resulted in a loss of permit to use this treatment method. The client was proceeding to build an expensive waste treatment plant.
- Custom Treatment:** **Custom FM** was added at a rate of 11 gallons per 4,000 gallons of waste. The holding time of each batch was approximately 6 hours. The system was buffered to reach a minimum pH of 6.
- Custom Results:** The BOD decreased to an average of 9,000 mg/L from the tanks and the overall plant BOD was reduced to an average of 2,500 BOD. The lowest overall plant BOD in the previous two years was 5,000 mg/L.

	Influent	System Effluent	Plant Effluent	
BEFORE	35,000	10,000	5,200	BOD mg/L
AFTER	35,000	9,000	2,500	BOD mg/L