

# Poultry Processor Avoids Penalties with New Air Floatation Technology

## Challenge

A major poultry processor in the Southeast United States was paying fines for exceeding its National Pollutant Discharge Elimination System (NPDES) permit levels for biological oxygen demand (BOD), fats, oils and grease (FOG) and total suspended solids (TSS). A lawsuit by the local authorities was pending. The wastewater treatment plant used two dissolved air Floatation units (DAFs) in parallel with only four minutes of retention time that resulted in high chemical costs and poor control.

## Solution

GE Water & Process Technologies conducted a site survey and engineering audit to determine the best solution. Jar tests were undertaken and a full-scale trial initiated to optimize the plant's performance. System modifications and chemistry changes were implemented. The air Floatation units were modified with a new entrapped air Floatation (EAF) technology licensed from Stewart Water Solutions Limited to maximize the reduction of BOD, FOG and TSS. Commodity chemicals were replaced with specialty polymers. Effluent stream samples were taken after the system modifications were completed to verify compliance, and a continuous quality monitor was placed on the effluent stream.

## Results

The new treatment program enabled the plant to meet all NPDES permit levels and avoid any legal actions. The project savings from sludge reduction and the avoidance of new capital equipment totaled US\$1,000,000.

## About GE Water & Process Technologies

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e-mailing [custhelp@ge.com](mailto:custhelp@ge.com).

**Global Headquarters**  
Trevose, PA  
+1-215-355-3300

**Americas**  
Watertown, MA  
+1-617-926-2500

**Europe/Middle East/Africa**  
Heverlee, Belgium  
+32-16-40-20-00

**Asia/Pacific**  
Shanghai, China  
+86 (0) 411-8366-6489

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