

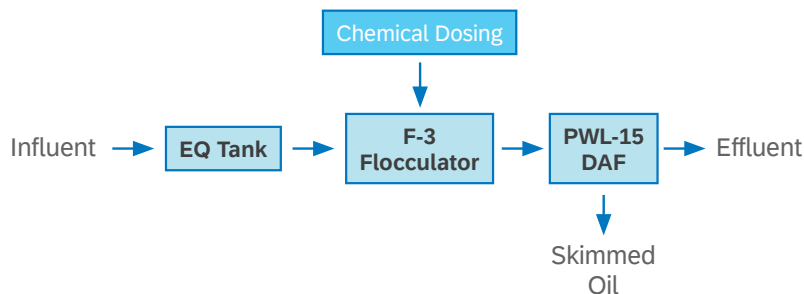
WASTEWATER SOLUTION

Oil & Gas

Renewable Diesel Refinery

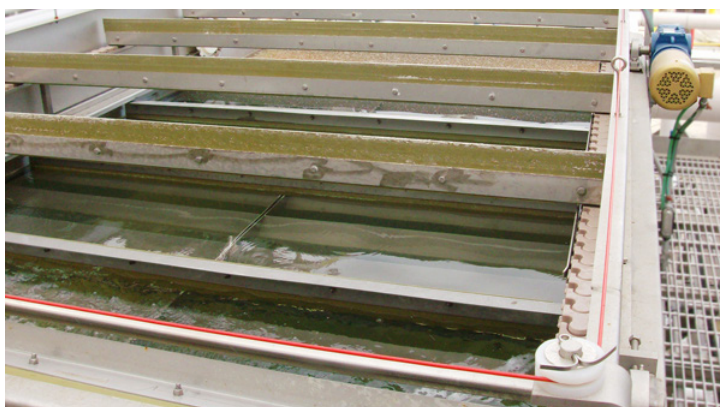


A Sulzer Brand



The 10,000 barrel-per-day diesel refinery processes recycled animal fat, used cooking oil, and other feedstocks into renewable diesel fuel. The wastewater treatment equipment needed on-site removes solids and recovers oils from site runoff and raw material containment areas.

The system was designed on a chemical/physical treatment process.



	Design Parameters	Discharge Requirements
Flow	80,000 GPD	
TSS	9700 mg/L	300 mg/L
FOG	7400 mg/L	100 mg/L

Source Water

Accidental Oil Contaminant (AOC)
Continuous Oil Contaminant (COC)

Equipment Supplied

PWL-15 DAF System
F-3 Flocculator in Stainless Steel
Chemical Dosing Equipment
Pneumatic Controls
Electrical Controls

DAF Sizing Calculations

Hydraulic Surface Loading Rate

$$\begin{aligned}
 &= \frac{\text{Feed Flow + Recycle Flow in gpm}}{\text{Effective Surface Area in sqft}} \\
 &= \frac{56 + 22 \text{ gpm}}{\text{x sqft}} = 1 \text{ gpm/sqft} \\
 &= 78 \text{ sqft required}
 \end{aligned}$$

Solids Loading Rate

$$\begin{aligned}
 &= \frac{\text{Weight of TSS in feed in lbs/hr}}{\text{Free Surface Area in sqft}} \\
 &= \frac{270 \text{ lbs/hr}}{\text{x sqft}} = 5 \text{ lbs/sqft/hr} \\
 &= 54 \text{ sqft required}
 \end{aligned}$$