CASE STUDY

Beef Abattoir

FRC
A Sulzer Brand

EQUIPMENT SUPPLIED

PCL-120 DAF Unit
Odor Control DAF Cover
U-Shaped Catwalk

FACILITY

Teys Australia (Cargill)
Wagga Wagga, New South Wales

DISCHARGE PARAMETERS

Flow : 1.87 MGD
TSS : 6000 mg/L
FOG : 6500 mg/L
Temp : 140° F

DISCHARGE REQS

TSS : 75% Reduction
FOG : 85% Reduction

The beef abattoir plant processes several thousand head of heavy cattle per day to produce meat products for export and domestic distribution.

The generated wastewater is laden with fatty, oily, and gritty materials that are washed down the drain during normal processing procedures and plant sanitation. A chemical-free DAF system was installed to process over 1300 gpm of wastewater for removal of TSS and FOG.

The nature of the solids in the wastewater grants separation without chemical addition. Combined with the high effluent temperature and density of the solids, the DAF unit operates at an extraordinarily high solids loading rate and achieves extremely high dry solids concentration thanks to the FRC DAF's dewatering grid.

DAF SIZING CALCULATIONS

Hydraulic Surface Loading Rate

$$= \frac{\text{Feed Flow + Recycle Flow in gpm}}{\text{Effective Surface Area in sqft}}$$

$$= \frac{1320 + 210 \text{ gpm}}{\text{x sqft}} = 1 \text{ gpm/sqft}$$

= 1530 sqft required

Solids Loading Rate

$$= \frac{\text{Weight of TSS in Feed in lbs/hr}}{\text{Free Surface Area in sqft}}$$

$$= \frac{3900 \text{ lbs/hr}}{\text{x sqft}} = 35 \text{ lbs/sqft/hr}$$

= 11 sqft required

FRC Systems | toll free: **800.331.2277** | phone: **770.534.3681** | email: **jwce@jwce.com** | web: **www.frcsystems.com**

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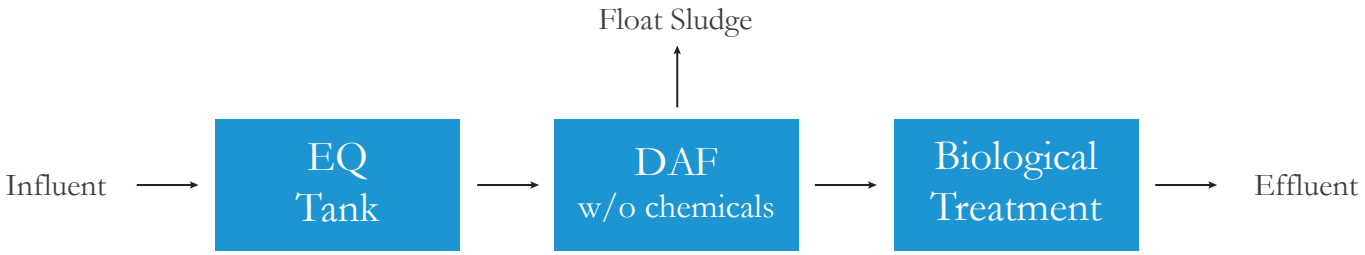
PROCESS OVERVIEW



OTHER SIMILAR PROJECTS

Company	Location	Flow Rate	Company	Location	Flow Rate
Hill Top Meats	Wetherill Park, NSW	530 gpm	JBS	Worthington, MN	495 gpm
Cargill	Ft. Morgan, CO	1320 gpm	JBS	Cactus, TX	430 gpm
Cargill	Rockhampton, QLD	1650 gpm	JBS	Plainwell, MI	1320 gpm
Cargill	Naracoorte, SA	1650 gpm	JBS	Tolleson, AZ	2000 gpm
John Soules Foods	Tyler, TX	660 gpm	National Beef	Dodge City, KS	2000 gpm

Since its founding in 1973, JWC Environmental has become a world leader in solids reduction and removal for the wastewater industry with its Muffin Monster grinders and Monster Separation Systems for screening, compaction and washing. JWC also solves challenging size reduction and processing problems in commercial and industrial applications through its Monster Industrial division. JWC Environmental is headquartered in Santa Ana, California, and has a global network of representatives, distributors and regional service centers to provide customer support. For more information, visit JWC Environmental at www.jwce.com.

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