

## SludgeMiner™

### USA Meat Processing Plant

#### SludgeMiner™

Dual zone Electro-coagulation / electro-oxidation  
Reactor technology  
Flow 20,000 US gallons/d (75 m<sup>3</sup>/d)

	INFLUENT mg/L	Treated Effluent mg/L
BOD <sub>5</sub>	5,000-10,000	<500
TSS	20,000-40,000	<500
FOG	15,000-20,000	<250

### Why SludgeMiner™ provides a Compelling Value Proposition

#### Conventional treatment options

Bio-chemical and DAF processes

- Larger tankage footprints
- Typically 40% higher OPEX and 30-40% Lower CAPEX
- Lower and unstable removal capabilities

**SludgeMiner™; non-biological, dynamic process with <15 min. total residence time.**

1. Instant on/off process to deal with bumpy start-up or production flows.
2. Very high and predictable removals confirmed.
3. Equipment for each phase is scalable and modular – buy what you need, when you need it.
4. Modules added every 6-8 months as client ramps production
5. **ReactorLink™**; Automated, guaranteed cost consumables supply and technical support program.
6. Clean equipment purchase or BOYDEL Fee-For-Service (F4S) model offered.



### TECHNOLOGY DEVELOPMENT

The SludgeMiner™ was configured on this wastewater stream with stable and predictable OPEX as follows:

- *Fe dosing*: 100 mg/L of influent
- *Polymer dosing*: 0.01 mg/L of influent
- *Power consumption* : 0.0114 kW / US gallon @ 480v 3ph (3 kW / m<sup>3</sup>)

Dewatering can be done using simple static tank decanting followed by sludge bag final dewatering and disposal by client.

**High Removals: FOG>95%, TSS>90%, BOD>80%**

**An example BOYDEL project in the USA meat processing industry**

- Very high contaminant loading
- Strict discharge regulations: (>250 mg/L FOG = plant closure)
- 3 stage plant start-up: 20,000 US gallons/d increasing by 20,000 US gallons/d every six months
- Required to manage inconsistent start-up flows and contaminant variability
- Limited space available for treatment solution

### SludgeMiner™ and meat processing

With success of the first commercial installation of SludgeMiner™ at a US meat processing facility imminent, Boydel will demonstrate an alternative solution to temperamental DAF, biology or bio-chemical processes for the thousands of similar facilities across North America.

SludgeMiner™ is a low cost, fully controllable, stable, low sludge and low odor treatment option for this and other high solids wastewater industries.