

## Case Study

# Livestock Husbandry Wastewater Treatment (Hubei Aonong Project)

The project mainly deals with swine urine, swine feces, flushing water and a small amount of domestic sewage produced in the reproduction process of the hog farm. It is high concentration organic wastewater.

Characteristics of the sewage treated: the raw water contains a large number of pathogenic microorganisms, which will spread through the water and endanger the health of human and livestock. Aquaculture sewage has typical "three high" characteristics, i.e. the concentration of organic matter is high with the COD is 3000-12000mg / L, and the ammonia nitrogen is 800-2200mg / L, the suspended solids are more than dozens of times higher than SS, which color is deep and contains a large number of bacteria, and the contents of ammonia nitrogen and organic phosphorus are high. Good biodegradability, concentrated flushing and discharge time, large impact load and so on.



Overview of the Hog Farm



Biochemical Unit



Membrane Permeate  
Quality

Membrane module installation

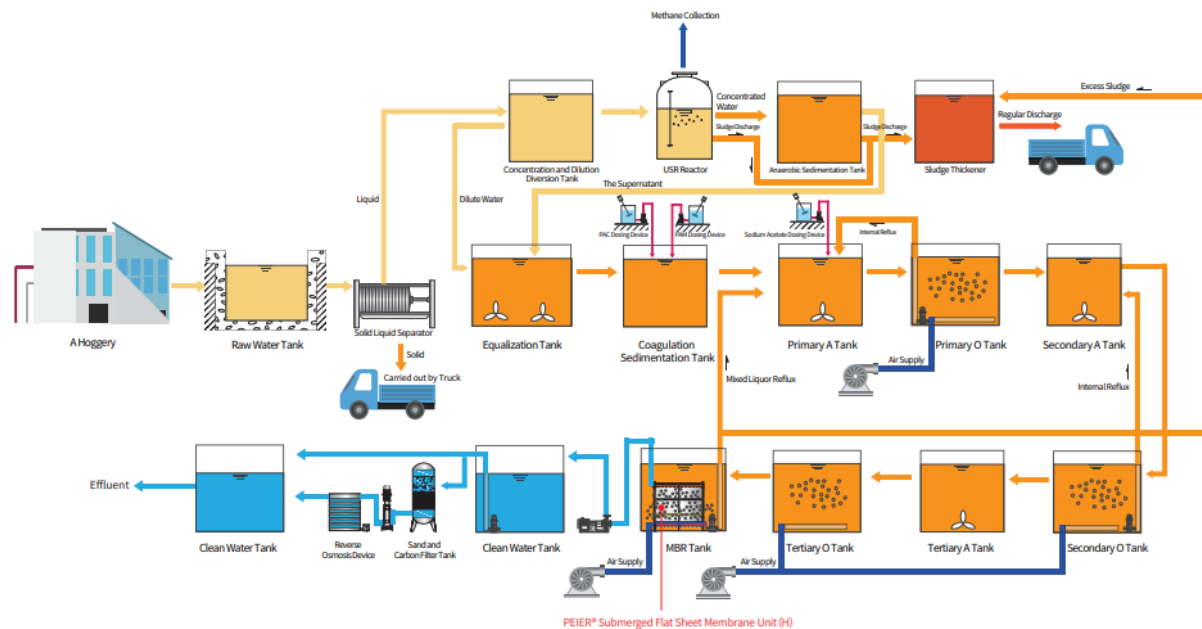
### 1. Outline of the Facility

<b>Location</b>	Anlu City, Hubei Province
<b>Type of Wastewater</b>	Livestock Wastewater( Swine)
<b>Flow</b>	700m <sup>3</sup> /d
<b>Commissioned</b>	Since Oct.,2020 (Peier MBR)

### 2. MBR Process Flow Sheet

#### MBR Flow Sheet

Process Flow Chart of Livestock Husbandry Wastewater Treatment (Hubei Among Project)



### 3. Design Parameter and Actual Data

Type	Parameter	Influent	Design	Actual	Capacity m <sup>3</sup> /D
Livestock Wastewater	COD <sub>cr</sub> (mg/L)	6000	200	105	≤700
	BOD <sub>5</sub> (mg/L)	2400	100	26.9	
	Ammonia Nitrogen (mg/L)	800	/	1.85	
	Total Phosphorus (mg/L)	200	/	7.06	
	SS(mg/L)	/	100	18.0	
	Chroma	/	/	250	
	pH	8	5.5-8.5	7.4	
	Turbidity (NTU)	/	/	0.34	

"Design" values of effluent are regulatory limits. "Actual" values are average values.

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