

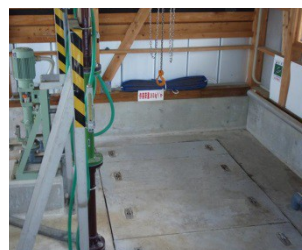
Livestock husbandry wastewater treatment(cattle and swine)

Ugo Town is famous for "Nishimonai Bon Dance", a significant intangible folk cultural asset, and "Ugo Beef." To raise safe, secure and delicious Ugo Beef, the town has built up an agriculture - livestock recycling system in which cows are raised on feed containing rice straw and bran while the rice is grown using compost from manure of the cows.

In the Compost Center that plays a core role in the system, the Composting House produces organic compost "Ugo-Organic" and the Urine Treatment Houses properly treats urine of cattle and swine. Livestock urine is generally hard to treat because the load fluctuates seasonally and farmers have no on-site storage tank for waste. However, KUBOTA Submerged Membrane Unit® created a solution to this difficult treatment and enabled stable discharge of pure effluent. And a part of the discharge is taken again into the rice fields.



Overview of Urine Treatment Plant



Membrane Tank (Expanded)



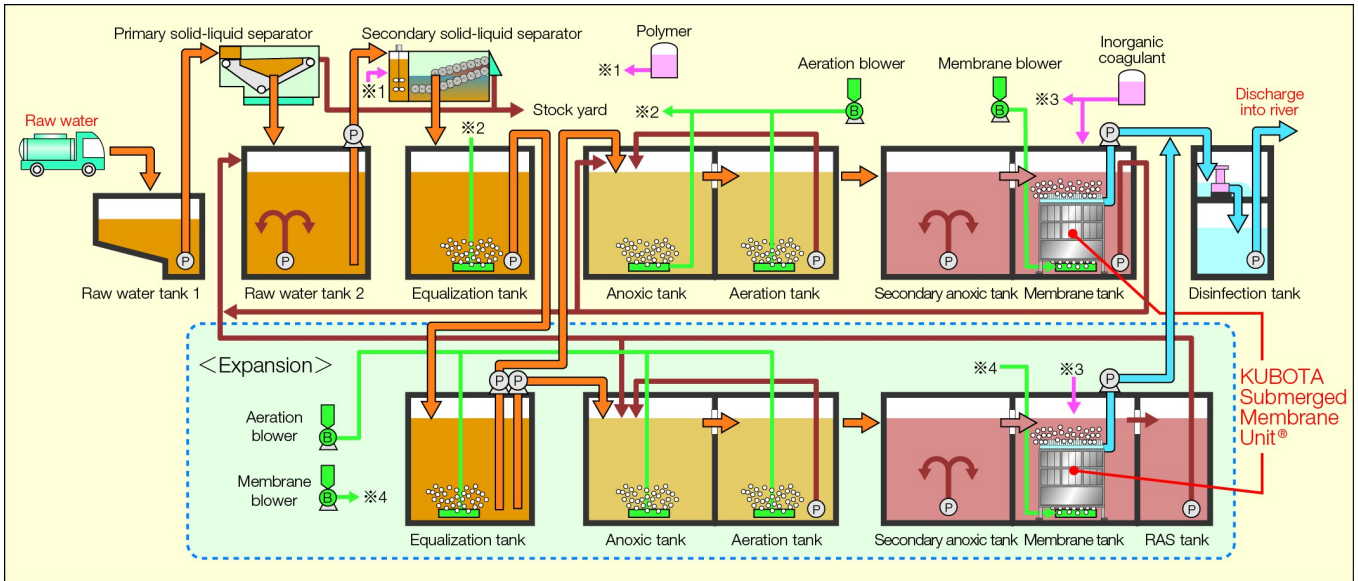
Composting Yard

Outline of the Facility

Location	Akita Prefecture, Japan
Type of wastewater	Livestock Wastewater (cattle and swine)
Flow	24.2m ³ /d (MBR)
Commissioned	April 2001 / (Expansion) April 2006

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MBR Process Flow Sheet



Design Parameter and Actual Data

Parameter	Influent		Effluent
		Actual	Design
BOD5	(mg/L)	29,600	<30
SS	(mg/L)	81,300	<40
T-N	(mg/L)	6,100	<60
T-P	(mg/L)	1,400	<8
pH	(-)	-	5.0~8.6

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

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