Wastewater System Meets Hotel Laundry Goals

A large, prestigious hotel in the Cayman Islands had limited fresh water resources. Their goal was to find a technology that would allow them to clean and recycle laundry water back into the process.

CHALLENGE

The corporate headquarters of this hotel chain put overall sustainability goals in place. One goal was to reduce overall water usage.

This location, surrounded mostly by water and a few other luxury hotels, needed a solution that had a small footprint, generated minimal noise, was cost-effective, and could clean the water to the point that it could be reused in the laundry process.

Their search for everything on their wish list proved difficult. Many wastewater treatment technologies were limited in their ability to handle higher contaminate levels due to water conservation and higher flow rates. Furthermore, the other systems had a much larger footprint than the hotel could accommodate.

Industry

Laundry

Key Benefits

1. Clean water for reuse.
2. Sustainability goals met.
3. Less chemical usage.
4. Adaptable systems able to expand.

Another main need was to have reusable water that would not compromise the cleanliness of the hotel's linens, towel, uniforms, etc.

As part of their research, the hotel tested water samples cleaned by the Clean Water Technology (CWT) proprietary GEM® System and conventional dissolved air flotation (DAF).

SAMPLE 1:	COMPARISON GEM SYSTEM VS. DAF							
LAUNDRY WATER /	COD BEFORE	COD AFTER	TSS BEFORE	TSS AFTER	CHEMICAL USE			TOTAL CHEM USED
GEM System / ppm	12,450	1,250	1,800	130	0	10	0	10
% Reduction		90%		93%				
DAF / ppm	12,350	2,300	1,700	125	994	115	0	1,109
% Reduction		81%		93%				+ 1,099

CLEAN WATER TECHNOLOGY
13008 South Western Ave Gardena• Los Angeles • CA • 90249 • USA
info@cwt-global.com • 310-380-4648 • www.cwt-global.com

SAMPLE 2:			COMPARISON GEM SYSTEM VS DAF					
LAUNDRY WATER	COD BEFORE	COD AFTER	TSS BEFORE	TSS AFTER	CHEMICAL USE			TOTAL CHEM USED
GEM System/ ppm	10,950	1,100	1,500	90	0	8	0	8
% Reduction		90%		94%				
DAF / ppm	11,010	3,380	1,900	233	560	86	0	646
% Reduction		69%		88%				+ 638

GEM® System

Ultrafiltration System

Solution

Clean Water Technology installed a GEM® System (Gas Energy Mixing) followed by Ultrafiltration (UF). This provided the highest level of contaminant removal using the least amount of chemistry, the smallest footprint and the flexibility to handle higher flows and contaminant loading as usage increases.

Conclusion

The GEM System followed by ultrafiltration provided the client with a system that was efficient, had a small footprint, used polymer sparingly and was the most effective at treating their used laundry water for reuse.

The GEM System and UF Systems are expandable and will require no additional capital expenditures to meet higher flows or loadings.

Effluent before treatment
Effluent after GEM
Effluent after GEM/UF

The hotel now has a wastewater treatment system that produces clean water for reuse, allowing them to meet corporate sustainability goals and produce clean, sanitary laundry.

Contact us today to begin a conversation!

CLEAN WATER TECHNOLOGY