Case Study: Onsite Chlorine Generator

On-Site Chlorine Generator and Automation Solutions Help Deliver Guest Satisfaction with Sustainable Results at a World Renown Resort in Kona

BACKGROUND

A prominent resort in Kona, Hawaii at Keauhou Bay is a blend of adventure, culture, heritage and authentic Hawaiian aloha hospitality. Offering the ultimate pool experience on the Kona coast, guests rave about the 200-foot lava tube water slide, 360,000 gallon activity pool, hot tubs, sprouting fountains and sandy-bottomed children's play area. This full-service resort has over 500 guest rooms with high occupancy rates and large bather loads year-round.

The Director of Engineering was looking for ways to increase water quality, guest satisfaction and operational efficiency. In addition, they found challenges related to high equipment maintenance and replacement costs. Everyday staff had to haul in buckets of chemical and load up the feeders. The control systems and feeders required regular service to maintain ideal operations. They were looking for a solution to help alleviate the fluctuating chemical budget, improve operational efficiencies and employee safety.

SOLUTION

We assessed the resorts' existing pool equipment, performed an in depth analysis of water chemistry and recommended an onsite chlorination system along with PPM controllers and remote monitoring to address water balancing and operational challenges and to help provide the ultimate swimming pool experience to the property's guests.

The program not only avoided up-front capital investment, but it also provided these benefits:

- Routine preventative maintenance service
- 24/7 computerized monitoring, emailed alerts, advanced remote troubleshooting support, and 30-minute logs of all water chemistry readings.
- Onsite chlorine generation system eliminated the use of bulk chlorine.
- Unique pH neutral chlorine option that reduces acid consumption. Only 1 gallon of muriatic acid is required for every 20lb's of chlorine manufactured.
- Complete control of bather comfort through the ability to control how much salt is added.
- Reduced overall equipment maintenance.
- Capable of producing up to 80lbs of chlorine per day to meet chlorine demand on the hottest and busiest days.

RESULTS

BENEFITS	ECONOMIC RESULTS
Projected annualized reduction in muriatic acid by 60% and eliminated annual use of 21,000 lbs of chlorine.	$70,615 in projected annual muriatic acid and chlorine savings.
Extended life of equipment due to properly balanced water. Projected extended life of pumps up to 2 years, heaters up to 4 years and plaster up to 10 years.	Estimated annual capital savings of $187,000.
Reduced handling of chemical by employees and eliminated risk of mixing sanitizer and muriatic acid.	Reduced employee and guest liability costs.