

PROJECT PROFILE

An Affordable Wastewater Treatment Solution for Commercial Properties

SUGAR BEACH RESORT, ST. LUCIA

Problem The wastewater system for Sugar Beach, A Viceroy Resort, (previously known as “Jalousie Plantation”) on the island of St. Lucia was destroyed by Hurricane Tomas in October, 2010. This Caribbean hotel destination desperately needed an emergency solution – to have a new system designed, built, shipped, installed, and functioning before the busy Christmas tourist season.

Solution After initial contact with the resort’s engineer on November 18th, an Orenco® AdvanTex® AX-Mobile™ Treatment System was custom-built for the resort and shipped to the site. Orenco employees flew to St. Lucia for the installation, and the system was up and running in four weeks from initial contact, just in time for Christmas holiday guests. The Orenco tank and treatment unit for this temporary, emergency solution would be relocated to become part of the resort’s permanent wastewater solution in the future.

AX-Mobile Quickly Replaces Storm-Damaged Wastewater System

On October 30, 2010, Hurricane Tomas hit the Caribbean island nation of St. Lucia hard. Forty-two inches of rain fell in 24 hours, causing massive rock- and mudslides. Fourteen people died, 10,000 homes were destroyed, and an estimated \$500 million in damage and losses were incurred by residents and businesses.

Sugar Beach, A Viceroy Resort, (previously known as “Jalousie Plantation”) is a 100-acre luxury property near Soufriere. Although this area was the hardest-hit part of the island, there were fortunately no injuries among the guests or staff, although the resort itself suffered severe damage.

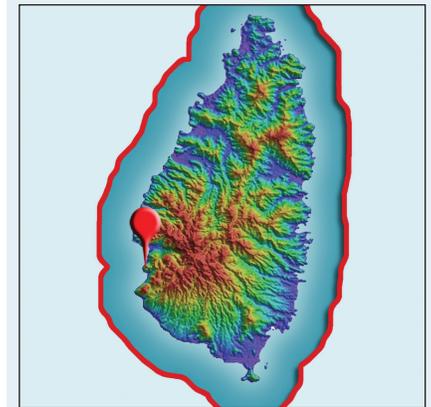


An AX-Mobile Treatment System was installed at this award-winning, 60-room resort on the island of St. Lucia in the Caribbean. It replaced an old, activated-sludge plant that was destroyed by Hurricane Tomas on Oct. 30, 2010. Photo courtesy of Sugar Beach, A Viceroy Resort.

Commercial — Mobile Market

Project Overview

SOUFRIERE, ST. LUCIA



Installation Date

- December 2010

Design Parameters

- Temporary system: 10,000 gpd (37,850 Lpd)
- Permanent system: 42,500 gpd (160,880 Lpd)
- Produce preliminary design in one week
- Maximize use of existing equipment
- Convert to permanent installation in future

Start-Up Deadlines

- Shipped 2 weeks after initial contact
- Installed 2 days after delivery
- Started up 4 weeks after initial contact

Collection System

- Gravity sewer to lift stations

Primary Treatment

- Concrete cast-in-place settling tanks
 - 10,000 gal. primary tank (37,850 L)
 - 11,000 gal. primary/surge tank (41,640 L)
- Fiberglass mobile primary tank
 - 15,000 gal. (56,780 L), 42 ft. T-Max™ tank

Secondary Treatment

- One 42 ft (12.8 m) Orenco AX-Mobile treatment unit (immediately)
- Two additional 42 ft (12.8 m) Orenco AX-Mobile treatment units (subsequently)

Tertiary Treatment

- Ultraviolet disinfection

Dispersal

- Ocean discharge

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Dana Ripley, P.E., of Ripley Pacific Company, was contacted in mid-November by resort representatives. The facility was shut down, and managers were trying to get a portion of their rooms ready for the holiday. Although they had insurance on the buildings, it was hard to file claims on lots that had literally disappeared. If the resort couldn't get a functional wastewater system by December 20th, it would lose all its Christmas bookings. The income from holiday guest visits was crucial to the resort's operation and to recouping losses from the damaged rooms and villas.

On November 22nd, Ripley met with resort staff on site. He had evaluated eleven different alternatives, and only Orenco's AX-Mobile could meet the resort's time constraints. The unit had to be in Miami on December 7th to make it to St. Lucia in time. "Other vendors were talking about 6-8 week minimums," said Ripley. "Orenco said they'd be ready to ship in 4-5 days. The owner was in disbelief."

The resort needed two AX-Mobile units to meet its emergency needs. Orenco had one unit in stock, and crews worked through the Thanksgiving holiday to build the second. Despite a two-day delay due to shipping and customs issues, the units arrived in St. Lucia on December 18th. Orenco employees Tristian Bounds, P.E., (who had assisted Ripley with system design and coordinated the manufacturing schedule) and Travis McAlister flew from Oregon to St. Lucia to be on hand for the units' arrival and to help employees install the system. From the time of delivery, the system was online in only two days, and the resort was able to open for the holidays as planned. Says Ripley, "I'm very proud of what Tristian did. And the time frame – it was just impossible."

The first system configuration was an emergency fix for the resort's wastewater problems. The resort then planned to clear a site 50-60 yards (45-55 m) away for an improved, permanent wastewater treatment system. After tanks and equipment from the ruined system could be removed, and a large retaining wall could be rebuilt, the existing AX-Mobile units would be relocated to become part of the resort's 42,500 gpd (160,880 Lpd) permanent wastewater solution. Because the system is modular, the resort will be able to add more units as needed.



The resort needed two AX-Mobile units – one for tankage and one for treatment – to meet its emergency wastewater needs, and has since added two more treatment units. These will become part of the resort's permanent wastewater solution.

Commercial — Mobile Market

The AX-Mobile comes as a complete, fully-plumbed package. The fiberglass tanks are lighter than concrete and, at only 8 feet (2.4 m) wide, these were easily trucked to the site, down steep narrow roads, on the back of a flatbed.



"The resort's goal was to get back online in time for their Christmas bookings, but they felt it was impossible and were resigned to trucking their wastewater out. I frankly looked at eleven different alternatives. Only Orenco could meet the deadline."

– Dana Ripley, P.E.,
Ripley Pacific Company

For information about Prelos™ Sewer, AdvanTex® Wastewater Treatment, or Orenco Controls™, contact Orenco Systems®, Inc.



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