

CASE STUDY

An Affordable Treatment Solution for Commercial Properties

THE JALOUSIE PLANTATION, ST. LUCIA

Problem

The wastewater system for the Jalousie Plantation, a luxury resort on St. Lucia, was destroyed by Hurricane Tomas in October, 2010. This Caribbean hotel destination desperately needed an emergency solution — needed 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 18, an Orenco® AdvanTex® AX-Mobile Treatment System was custom-built for the Jalousie Plantation 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 will be relocated to become part of the resort's permanent wastewater solution in the future.

AX-Mobile Quickly Replaces 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



Photo courtesy of The Jalousie Plantation, Sugar Beach
www.jalousieplantation.com

This AX-Mobile was installed on an award-winning, 60-room resort on the island of St. Lucia, in the Caribbean. The AX-Mobile replaced an old activated sludge plant that was destroyed by Hurricane Tomas on Oct. 30, 2010.

Soufriere (the hardest-hit part of the island), fortunately had no injuries among their guests or staff but suffered severe damage to a section of their resort.

Dana Ripley, P.E., of Ripley Pacific Company, was contacted in mid-November by resort representatives. The resort 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

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.

The Jalousie Plantation, a 100-acre luxury hotel and resort on Sugar Beach near

Commercial Market

Project Overview

SOUFRIERE, ST. LUCIA, WEST INDIES



Installation Date

- December 2010

Design Parameters

- Temporary system: 10,000 gpd (37,854 Lpd)
- Permanent system: 75,000 gpd (283,906 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 (37,854 L)
 - 11,000 gal. primary/surge tank (41,640 L)
- Fiberglass mobile primary tank
 - 15,000 gal. (56,781 L) Orenco T-Mob tank

Secondary Treatment

- One AX-Mobile275-42 treatment unit

Tertiary Treatment

- Ultraviolet disinfection

Dispersal

- Ocean discharge

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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 22, Ripley met with resort staff on site. He had evaluated eleven different alternatives, and only Orenco's® AX-Mobile could meet the time constraints the Plantation needed. 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 (of the Jalousie Plantation) was in disbelief."



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

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 unit 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 AX-Mobile's arrival and to help employees install the system. From the time of delivery, the system was online in only two days, and the Jalousie Plantation was able to open for the holidays as planned. Says Ripley, "I'm very proud of what Tristian did, and the timeframe – it was just impossible."

This first system configuration was an emergency fix for the resort's wastewater problems. The Plantation is now in the process of clearing a site 50-60 yards away for an improved, permanent wastewater treatment system. After tanks and equipment from the ruined system are removed and a large retaining wall is rebuilt, the existing AX-Mobile units will be relocated to become part of the resort's 75,000 gpd permanent wastewater solution. The system is also modular, so the resort will be able to add more units as circumstances require.



The resort needed two AX-Mobile units — one for tankage and one for treatment — to meet its emergency wastewater needs. These two units will become part of the resort's permanent wastewater solution, after equipment from the ruined system is removed.

Commercial Market

"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 more information about AdvanTex® Treatment Systems, contact Orenco Systems®, Inc., at 800-348-9843.



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