

UV Pure® Case Study	
Application:	Municipal_Institutional Projects
Solution:	Hallett® 30 systems
Location:	Soyo Municipal Hospital in Angola



Pure, safe water.
Always.

Orenco and UV Pure® provide safe water, always for the Soyo Municipal Hospital in Angola

Orenco Systems® Inc. (Orenco) recently completed the sale and commissioning of a wastewater treatment system for the Soyo Municipal Hospital in Angola. The objective of the project was to provide wastewater treatment for a Design Flow of 40,000 Liters per day of greywater and blackwater effluent from the newly built Soyo Municipal Hospital.

The project had two goals - to provide a wastewater treatment system that would meet the design specifications (stated above), as well as provide a system designed and built with rugged, dependable parts and components. The system also had to have low operation and maintenance requirements, so that it could be operated on a part-time basis by an individual with little to no wastewater knowledge.

To achieve these goals, Orenco's solution was the modular AdvanTex® AX-Max wastewater treatment system with supplementary tertiary treatment. The cost of the Orenco wastewater treatment system equipment delivered to the Port of Soyo, is approximately US \$30.00 per treated U.S. gallon.

As there is the potential for bio-hazardous waste from the hospital to end up downstream in the wastewater treatment system, Orenco highly recommended that ultraviolet radiation (UV), as a disinfection method, be used on all wastewater discharged from the treatment system. The Hallett® 30 UV disinfection unit by UV PURE® was recommended by Orenco engineer, Tristian Bounds, P.E., who said, "The selection of the Hallett-30 units was based on the trouble-free design, ease of operation and maintenance, and excellent experience we have had with UV Pure®."

The Orenco Team managed the project from beginning to end. The initial project inquiry came in on June 7, 2011 and the AdvanTex® AX-Max wastewater treatment system arrived and was installed late last month (February 17, 2012). In that time frame Orenco was able to provide treatment technology recommendations, as well as preliminary system sizing and budget information, based on the customer's designs. Orenco also provided the construction team with recommendations on UV disinfection for all effluent discharged from the treatment system, as well as layout and configuration of the controls and UV units in a secure building next to the AdvanTex AX-Max system. The shipment of the AdvanTex AX-Max wastewater treatment system also included spare parts for the treatment equipment, control panel, UV disinfection units and system plumbing.

All electrical equipment included in the AdvanTex AX-Max treatment system had to meet the electricity available at the Soyo Municipal Hospital, which is 230 VAC / 50 Hertz / Single Phase. The Control panel for the AdvanTex AX-Max treatment system was programmed for use in two languages (English and Portuguese), as Portuguese is the Angolan national language. A Touch-Screen control unit was installed on the outside of the control panel to provide real-time access to the AdvanTex AX-Max system operations. The Touch-Screen provides a straightforward interface for system operations staff to access, review and/or modify the system data logs and adjustable parameter settings without the need of a laptop and serial port/null-modem cable.

In addition to providing language specific manuals, an Orenco technician traveled to Soyo, Angola in February to provide five days of system commissioning work, including an AdvanTex AX-Max treatment system introduction, equipment orientation, and an overview of system operation and maintenance, which included the Hallett® 30 units. All commissioning and training sessions have a practical, hands-on focus. For more info visit <http://www.orenco.com/>.