Customer Success Story

Location: Guyana

Drinking water from the Amazon River?

It is possible with innovative water technology from Applied Membranes

In the Amazon River, removing bacteria, viruses, and organics is key to ensure a safe water supply.

Challenge

The Amazon River contains high levels of bacterial contamination, suspended solids, turbidity, arsenic, and organics. People in nearby town of Bartica described it as “chocolate milk-type river water.”

The existing water filtration system included antiquated conventional filtration with sand media and clarifiers.

An advanced water treatment solution was required to treat the water and provide clean, safe, and sustainable water for human consumption.

The goal of the project was to ensure the production of high-quality water while mitigating the risks associated with various contaminants.

Addressing these concerns demanded a sophisticated approach. For the customer, a tailored solution was crucial.

Solution

Applied Membranes designed, built, and commissioned a specialized ultrafiltration **(UF)** packaged membrane water treatment system enclosed within two (2) 40-foot ISO industrial-grade insulated containers, with 40 UF modules each.

Containers include fully integrated process piping, actuated valving and instrumentation.

The AMI system generates **1,750,000 gallons per day (275 m3/h)** of high-quality product water.

The system was designed for simple plug-and-play onsite installation and includes pre- and post-treatment equipment.

Key Components and Features:

- UF System
- ISO industrial grade insulated 40-foot containers
- Clean-in-Place (CIP) system

Results

Applied Membranes’ robust water treatment solution consistently produces high-quality low conductivity filtrate water.

The system has been in operation since 2019 providing clean drinking water to the area.

High-quality output: Using AMI Ultrafiltration, the UF filtrate/product water is **less than 0.1 ntu** turbidity.

Efficiency: Large quantities of chemicals used in conventional filtration are eliminated with AMI UF technology.

Durability: System was engineered to withstand various environmental conditions for optimal performance and longevity.

AMI solution not only addressed the immediate concerns of water quality but also provides a sustainable and efficient means of water management.

With an innovative approach, Applied Membranes exceeded the customer’s expectations.

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