

## 2008 Case Study

### Sea Water Reverse Osmosis Unit

### Major Shopping Mall, Yemen



## INTRODUCTION

Seawater reverse osmosis system was manufactured and supplied by Pure Aqua in March 2008 for a water treatment company in Yemen, the end user is a major shopping mall in Yemen.

The total capacity is 40,000gpd of product water used for drinking, cooling tower and irrigation purposes.

## SYSTEMS & PROCESS

The SWRO system was completed with advanced PLC control panel, flushing system, and pre & post treatment systems, all skid mounted system.

Feed water to the system is from seawater, TDS of about 42,000 PPM. The SWRO system was modified from our SWI Series. The system design was based on high rejection TFC Spiral wound low fouling membranes.

## PERFORMANCE

The desalination plant produces 40,000 GPD of drinking water with TDS less than 350 mg/L from feed water with a TDS of about 42,000 mg/L at temperature range of 19 to 27°C. Trials concluded that acid injection could be suspended without affecting the operations of the plant.

From its initial start-up in Dec 2008, the plant has been running smoothly with minimal troubleshooting. As a result, the mall has a reliable and steady supply of potable water at a cost far less than shipping water to the site.