



# Nutritional Plant in Singapore Saved 17,640m<sup>3</sup> of Water Annually with 3D TRASAR™ Technology

**NALCO** Water  
An Ecolab Company

CASE STUDY - FOOD & BEVERAGE

CH-2173AP

## BACKGROUND

The customer is a major manufacturer of premium-quality nutritional products in Singapore. The company has a strong commitment to product quality assurance, water saving and environmental sustainability.

## SITUATION

Facing stress from high freshwater consumption at the plant and rising water prices, the customer organized a comprehensive plant audit to find opportunities to improve the efficiency of their water use. During the audit, Nalco Water and customer utility representatives worked together to carry out a full plant Mechanical, Operational and Chemical (MOC) assessment. The objective was to evaluate the site's water management practices and utility system efficiency, with a focus on water reuse. After the audit, Nalco Water proposed several opportunities for water savings to meet the plant's sustainability goals.

The customer used a water softener system for boiler feedwater pretreatment. Freshwater was used for rinsing the softener resin in the resin regeneration process, which was then discharged to the wastewater system. The discharged rinse water quality was normally clean enough to be used as cooling water makeup. However, the rinse water would occasionally fail to meet the specifications for cooling water makeup due to high conductivity.

### CUSTOMER IMPACT

eROI<sup>SM</sup>

### ECONOMIC RESULTS

Reductions of the process water usage for cooling water as well as make up water for the cooling tower: total water freshwater saving is estimated at 17,640 m<sup>3</sup>/yr



Actual savings due to reductions in freshwater consumption: \$29,771 USD

Reduction of the wastewater discharge: an estimated 17, 640 m<sup>3</sup>/yr



Actual savings due to reductions in wastewater discharge fees: \$29,504 USD

eROI is our exponential value: the combined outcomes of improved performance, operational efficiency and sustainable impact delivered through our services and programs.

