

PRODUCTION AND MANUFACTURING



Circular solution helps Nestlé save water and energy in Brazil

INSIGHT

As the world's largest food and beverage company, Nestlé is committed to preserving resources for future generations by:

- Reducing water across its operations
- Using sustainably managed and renewable resources
- Achieving its zero-waste goal

A Nestlé milk production plant in southeastern Brazil challenged its suppliers to develop improvement projects that would deliver energy savings and reduce water consumption and CO₂ emissions. In particular, the plant was looking for an economically viable way to reuse the condensate organic water (COW) stream generated by the production of powdered milk. Nalco Water presented a plan that was approved, implemented and delivered sustainability savings within six months.

INNOVATION

Nalco Water conducted studies and prepared a water map to identify potential uses for COW water recovery. A work plan followed, which led to the recommendation that the COW water be used as cooling tower make-up.

The solution required a novel approach: creating and installing customized pre-treatment and heat recovery systems along with 3D TRASAR™ monitoring and control technology. This had a considerable impact on the plant, reducing costs as well as water and energy use, further supporting Nestlé's ambitious sustainability goals.

TECHNOLOGY

- **3D TRASAR™ Technology for Cooling Water**

eROISM

ANNUAL SAVINGS

WATER



175,000 m³

freshwater saved — equivalent to the annual drinking water needs of more than

159,000 people

\$13,500

in reduced water costs

25,000 m³

of wastewater effluent eliminated

\$140,000

a year in cost savings

ENERGY



14,500 GJ

reduction in fuel consumption

\$100,000

in reduced energy costs

AIR



Decreased CO₂ emissions by

496 metric tons

per year — equivalent to the CO₂ absorbed by more than

22,000

trees a year

TOTAL COST SAVINGS

**\$253
THOUSAND
ANNUALLY**