

CASE STUDY

Switching Chemical Treatment from 5-Gallon Liquid Pails to Solid Chemistry Helps Maximize Safety & Sustainability at Dairy Plant

BACKGROUND

A large dairy plant was looking for ways to meet the target goals of improved safety and sustainability by 2025. These targets included elimination of solid waste to land-fill, 100% recyclable, reusable and compostable packaging, and a 30% reduction in emissions and water usage. The location precludes the possibility of bulk chemical supply, resulting in the use of small, liquid chemical pails for their cooling system water treatment. The pails came with complications including hazardous chemical handling, splashing and spilling, product wastage, land contamination, program management concerns, microbial fouling in terms of bio-film and drum disposal issues.

SOLUTION

The water treatment company recommended a 6-month trial using proven solid chemistry on two cooling systems. They installed four gravity fed dissolvers and began feeding a solid corrosion inhibitor, solid scale inhibitor, solid chlorine and a solid organic acid.



RESULTS

After the 6-month trial and a 3-month observation, there were several impacts on program costs and achieving the sustainability goals.

The condenser inspection proved free of scale and corrosion. There was an 18% reduction in overall chemistry costs, and an 87% reduction in chemical weight handled. Thus, CO2 emissions and hydrocarbon emissions were drastically reduced as well as plastics to landfill because the solution provided entirely recyclable packaging. The dairy plant is well on target to meet the 2025 safety and sustainability goals and discovered the added benefit of reduced water treatment expenses.



94%
REDUCTION
IN CARBON
EMISSONS



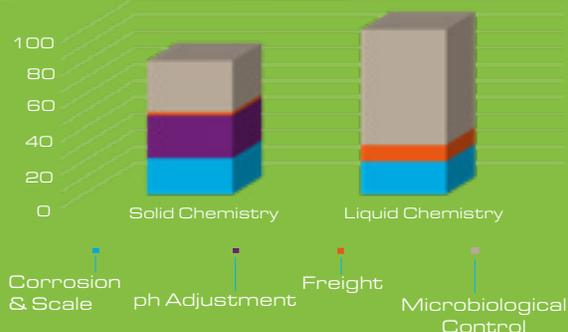
95%
REDUCTION
IN PLASTIC
LANDFILL WASTE



95%
REDUCTION
IN HYDROCARBON
CONSUMPTION



87% Reduction in Chemical Weight Handled



18% Reduction in Overall Chemistry Cost



INCREASED
SUSTAINABILITY



REDUCTION IN
WATER TREATMENT
EXPENSES