



Dufferin-Peel Catholic District School Board Greater Toronto Area, Canada

OVERVIEW

A Municipal School Board wanted to reduce operating costs, demonstrate environmental responsibility and create a safe environment for staff and students by eliminating the risks of handling and storing toxic chemicals on-site for treating cooling tower water.

COOLING SYSTEM CHALLENGES

The 250 Ton BAC cooling tower (induced draft cross-flow) & Trane Chiller, at the chosen site had experienced significant scaling and corrosion.

- The cooling tower had 1/4 inch of scale over most of the interior and exterior fill surface
- Water turbidity obscured the 15-inch deep sections of the sump reservoir
- A persistent layer of muddy silt coated most surfaces at or below sump water level
- Evidence of leaks in the sump caused by "white rust"



SOLUTION

The EnviroTower system was installed at the initial site in 1995. As well, a complete startup and results monitoring program was initiated, including:

- Flush and recharge of the recirculating condenser water system
- Resetting the automatic blowdown discharge cycle
- Weekly monitoring to observe tower circulating water appearance, log water use and measure water quality

RESULTS

Significant improvements in the condition of the cooling tower were realized within weeks and validated by independent testing:

- Elimination of almost all the old scale formed on the tower surfaces, with several bucket loads of scale removed during the first 6 weeks of operation. The fill was restored to new appearance within 4 months.
- Minor sump "holes" were revealed upon removal of scale and were repaired
- Biofouling evidence was absent, no slime or algae growth was visible in the tower
- Third-party, coupon-demonstrated tests, conducted over the past 11 years show consistently low corrosion rates (below 2 mpy for steel and 0.07 mpy for copper)

Significant energy and water savings are estimated to have resulted from installing EnviroTower's system:

- Water consumption reduced by up to 25% with increased cycles of concentration compared with chemical treatment
- Thousands of KW hours saved due to elimination of scale and fouling on condenser tubes

Health and safety liability was greatly improved by eliminating the need for chemical storage and handling.

With these strong results, the School board decided to install EnviroTower's system on 40 additional schools across its jurisdiction.

The Environmental Verification Program (Canadian Government, recognized by the E.P.A. in the United States) confirmed the system's claims, based on extensive testing of 12 towers at 9 different sites.

EnviroTower is the most technically advanced system for cooling tower water treatment. The patented system replaces traditional chemical treatment; providing total control of scale, corrosion and other factors to create an exceptionally clean system that dramatically reduces energy and water consumption, while eliminating toxic water discharge to improve our environment. The technology has been installed in 50,000 facilities worldwide, and provides an average payback on investment within 12 to 18 months.

For more details, please visit www.envirotower.com. or sales@envirotower.com