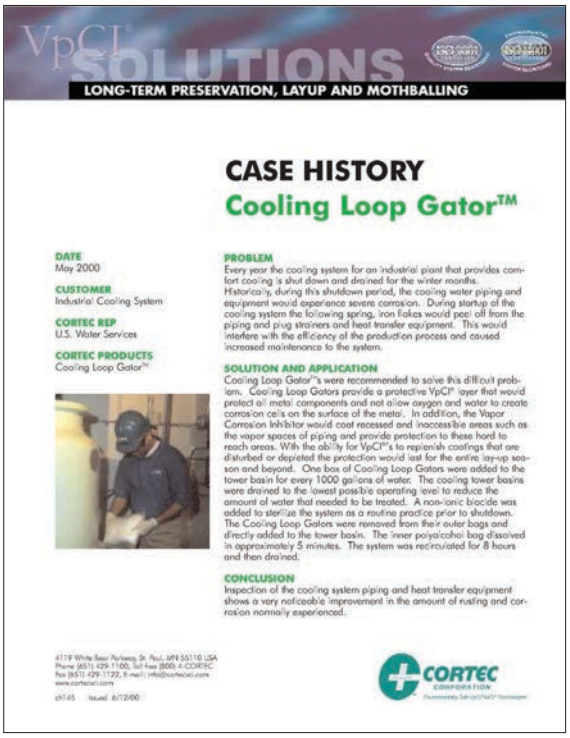

# CASE HISTORY SPOTLIGHT

## Case History #145: Winter Layup of Comfort Cooling System


VpCI SOLUTIONS

LONG-TERM PRESERVATION, LAYUP AND MOTHBALLING

**CASE HISTORY**

**Cooling Loop Gator™**

**DATE**
May 2000

**CUSTOMER**
Industrial Cooling System

**CORTEC REP**
U.S. Water Services

**CORTEC PRODUCTS**
Cooling Loop Gator™

**PROBLEM**
Every year the cooling system for an industrial plant that provides comfort cooling is shut down and drained for the winter months. Historically, during this shutdown period, the cooling water piping and equipment would experience severe corrosion. During startup of the cooling system the following spring, iron flakes would peel off from the piping and plug strainers and heat transfer equipment. This would interfere with the efficiency of the production process and caused increased maintenance to the system.

**SOLUTION AND APPLICATION**
Cooling Loop Gator™s were recommended to solve this difficult problem. Cooling Loop Gators provide a protective VpCI® layer that would protect all metal components and not allow oxygen and water to create corrosion cells on the surface of the metal. In addition, the Vapor Corrosion Inhibitor would coat recessed and inaccessible areas such as the vapor spaces of piping and provide protection to these hard to reach areas. With the ability for VpCI®'s to replenish coatings that are disturbed or depleted the protection would last for the entire lay-up season and beyond. One box of Cooling Loop Gators were added to the tower basin for every 1000 gallons of water. The cooling tower basins were drained to the lowest possible operating level to reduce the amount of water that needed to be treated. A non-ionic biocide was added to sterilize the system as a routine practice prior to shutdown. The Cooling Loop Gators were removed from their outer bags and directly added to the tower basin. The inner polyalcohol bag dissolved in approximately 5 minutes. The system was recirculated for 8 hours and then drained.

**CONCLUSION**
Inspection of the cooling system piping and heat transfer equipment shows a very noticeable improvement in the amount of rusting and corrosion normally experienced.

CORTEC CORPORATION

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An industrial comfort cooling plant usually had problems with severe corrosion in cooling system piping and equipment during seasonal shutdown for the winter months. Iron flakes would peel off the piping and plug strainers and heat transfer equipment during startup the following spring, reducing efficiency and increasing system maintenance. Cooling Loop Gator® was recommended as a solution to the problem.

For application, the cooling tower basins were drained to their lowest possible operating level, and the Cooling Loop Gator® pouches were added to the water (a non-ionic biocide was also added as part of their routine practice prior to shutdown). The water-soluble Cooling Loop Gator® pouches dissolved in about five minutes, releasing the product so it could be recirculated for eight hours before draining the system. As a result, there was a very noticeable improvement in the amount of corrosion and rust compared to what normally occurred in the piping and heat transfer equipment.

COOLING LOOP GATORS

To read the full case history, please visit: **https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch145.pdf**

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