



water SOLUTIONS™

CASE STUDY

Cooling Tower Toad Industrial Cooling System

Problem: Every year the cooling system for an industrial plant providing comfort cooling was shut down and drained for the winter months. Historically, during this shut down period the cooling water piping and equipment would experience severe corrosion. During startup of the cooling system the next spring, iron flakes would peel off the piping plugging strainers and heat transfer equipment. This would interfere with the efficiency of the production process and cause an increase in maintenance.

Solution: USWS/UCI recommended Cooling Tower Toads to solve this difficult problem. Cooling Tower Toads would provide a **V**apor **C**orrosion **I**nhibitor protective layer that would film all the metal components not allowing oxygen and water to create corrosion cells on the surface of the metal. In addition, the VCI would coat recessed and inaccessible areas such as the vapor spaces of piping providing protection to these hard to reach areas. With the ability of the VCIs to replenish coatings that are disturbed or depleted, the protection would last for the entire lay-up season and beyond.



Application: One box of four 2.2 lbs bags of Cooling Tower Toads 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 maintenance practice prior to shutdown. The Cooling Tower Toads 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. Call USWS/UCI for Cooling Tower Lay-Up Guidelines utilizing the Cooling Tower Toads.

Results: Inspection of the cooling system piping and heat transfer equipment showed a very noticeable improvement in the inhibition of rusting and corrosion thus reducing maintenance and increasing efficiency.

If you have any questions regarding Cooling Tower Toads, please contact USWS/UCI at 763-689-3636 or check out our website at www.uswaterservices.com.