

RECORDED BENEFITS

- 50% reduction in bleach consumption
- Reduce halogenated organic compounds (AOX, THM)
- No biofilm growth
- No Legionella detected
- Lower ORP levels and reduced corrosion rates
- Ability to remotely monitor and control biofilm using OnGuard 3B and OnGuard Online

Novel Cooling Tower Treatment Program Reduces Halogenated Organic Compounds

ClearPointSM Biofilm Detection and Control Program

Customer Challenge

A food producer in Western Europe was searching for a cost-effective solution to improve performance of their cooling system. The key objectives were to reduce halogenated organic compounds (AOX, THM etc.) in the cooling water blow down, improve microbiological and corrosion control, address biofilm issues and ensure Legionella compliance.

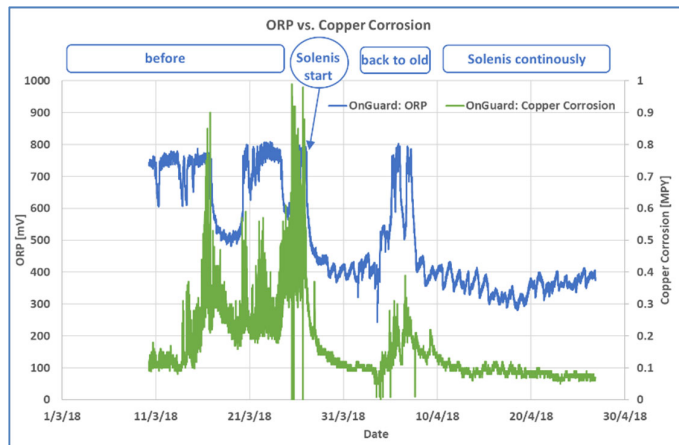
Recommended Solution

Solenis recommended the ClearPointSM biofilm detection and control program comprising three components — OnGuardTM 3B analyzer, BiosperseTM NT1901 chlorine stabilizer and Solenis' superior service.

ClearPoint detects and measures real-time biofouling and automatically adjusts chemical feed as required. Microbiological activity can be reduced significantly without the adverse side effects associated with strong oxidizing biocides like bleach.

Results Achieved

After installation and start-up, the oxygen reduction potential (ORP) dropped from over 600mV to 400mV and corresponding copper corrosion rates were reduced. During a 3-day interval, the new treatment was temporarily stopped and the old program was reintroduced showing high copper corrosion rates. During the new treatment, overall bleach consumption was lowered by 50%, reducing the generation of environmentally harmful disinfection by-products. In addition, low total bacterial counts were achieved, and no Legionella was detected.



Graph showing lower ORP and corresponding lower corrosion rates

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