



## Case Study

### Problem 1 – Fouled Air Scrubber System

An air scrubber system located in a high ammonia environment with a low pH (2.8) water and conductivity of <1000 was exhibiting significant biomass build-up. When screens were pulled for cleaning, the mesh contained a thick layer of bio-mass. (Image 1) In addition, the system's recirculating pump exhibited operational problems and the pH probe was typically fouled.



Image 1: Before BCP™ 1015 treatment: foam & biomass material collected at the screen

### Solution – Clean-up with BCP™ 1015

The air scrubber system was cleaned up over the course of 7 days. The system was dosed 2 times a day with BCP™ 1015. When the screen was pulled, there was little bio-mass and the area was much cleaner. (Image 2) The customer noted less trouble from the recirculation pump and the pH probe needed significantly less cleaning.



Image 2: After BCP™ 1015 treatment

### Problem 2 – Fouled Condenser Water Cooling System

A condenser water cooling loop had significant biomass build-up in the fill. The extent of the fouling was seen when the fill was cleaned in September.

### Solution – Clean-up with BCP™ 1015 & Maintain with Biofilm Control Program based on BCP™ 1015

Treatment with BCP™ 1015 was commenced in December 2013 using a feed rate of approximately one gallon every day (100 ppm). During the first 4-5 weeks of this clean-up regimen, a thick slurry with much dirt was formed on the surface.

In February, the dosing program was changed  $\frac{3}{4}$  of a gallon of BCP™ 1015 (75 ppm) fed two times per day followed 3 hours later with stabilized chlorine dioxide. This biofilm control program was in place for 7 months until September 2014. A side-stream filter was also installed in mid-March 2014. At the end of this time the towers were cleaned by the HVAC contractors and the fill showed significantly less biomass as compared to a year earlier when BCP™ 1015 treatment was first begun.

This system was sanitized every 5-8 weeks. Before the addition of BCP™ 1015, significant foam developed during the sanitizations. After 8 weeks of using the clean-up protocol, less foam was produced during the sanitization of the condenser water loop.

After approximately ten months of using BCP™ 1015, the customer states 'it is apparent the condenser water system is significantly cleaner with less biomass'. This program was a success and will be continued by the customer based on the significant improvement of the condenser water system.

