Fouling in a Condenser of a Chiller and algae in the Cooling Tower

Transpek Silox is one of the oldest chemical facto
state of Gujarat in India. When build, the factory
outside the city borders, but today the city is all a
place. This makes the dumping of water for this f
The authorities allow only a certain quantity of po
be dumped in their waste water system of the city
infrastructure of the city has not grown as fast as
so the waste water plant is running at its limit.
This forces the company to run their cooling towe
high concentration of TDS. High concentration of
well Calcium carbonate is responsible for heavy s
condenser as well in the cooling tower itself. The
antiscaleant chemicals showed only very little im
Also the cooling tower dedicated only to this con
lot of algae, even when adding a lot of biocide to
water.

Condenser cleaning, therefore has been a regular
maintenance department. Even when doing regula
the condenser, there have been now and than eme
where they have to shut down the system due to b
the condenser, and insufficient performance of th
The algae in the cooling tower contaminated the c
and has additionally reduced the performance of t
beared the risc of biofilm in the loop.

A look inside the condenser or underneath the cooling tower speaks a clear language. The condenser is always full of scale and corrosion, in the cooling tower the algae have formed thick layers of algae.

A few weeks after the installation of the Merus ring in the loop of the cooling tower and the condenser, the condenser has been due to scheduled cleaning. Even if maintenance have already recognized a very positive development on the cooling tower itself, the condenser was anyhow opened in order to see the results inside the condenser.

As can be clearly seen at the pictures above, the condenser lost almost all its scale, the tube entrance is totally clean. Whereas algae have grown in long strings before, there are only traces and spots of algae found.

Seeing this results, customer stopped adding any kind of chemicals to treat the water. Even having concentrations of more than ١٠,٠٠٠ TDS in the cooling water, fouling or scaling don't start again.