



Case Study - Office Building Cooling Tower - Bio and Scale
(10 week evaluation)

Location:	<i>Bouras Office Building Summit, New Jersey</i>	Date of First Inspection:	<i>July 11, 2012</i>
Application:	<i>Cooling tower</i>	Date of Second Inspection:	<i>September 10, 2012</i>
Purpose of Installation:	<i>Eradication of bacteria and algae growth and prevention of limescale accumulation.</i>		
Installation Date:	<i>June 21, 2012</i>		

Installation Details

Water conditioner model	<i>HydroFLOW Custom 10" i range water conditioning device</i>
Pipe Outer Diameter	<i>8.7 inches Outside Diameter</i>
Pipe Material	<i>Iron</i>
Installation location	<i>Cooling tower feed pipe before it splits to each cell</i>



Overview

Algae grows uncontrollably in the basin of the cooling tower. In addition, limescale has accumulated on the cooling tower honeycomb fills, louvers and infrastructure even though the water is being treated with chemicals, under the supervision of the facility manager and an outside chemical company.

Trial method:

1. Monitor Hydropath technology's ability to eradicate biological growth in the basin of the cooling tower.
2. Monitor Hydropath technology's ability to prevent limescale accumulation on the cooling tower's honeycomb fills, louvers and infrastructure.

Expected results:

1. Biological growth will substantially reduce, without additional chemical treatment.
2. Limescale will not accumulate on honeycomb fills, louvers and portions of the infrastructure where the treated recirculating water comes in contact with.
3. Once positive progress is achieved, some chemicals can be reduced or discontinued without any negative effects.

Installed *HydroFLOW* 10" i range device



Cooling tower cells



Existing and current conditions after 10 weeks

Basin



Without *HydroFLOW*



With *HydroFLOW* for 10 weeks



Without *HydroFLOW*



With *HydroFLOW* for 10 weeks

Honeycomb Fills



Without *HydroFLOW*

With *HydroFLOW* for 10 weeks

Results after 10 weeks

1. Approximately 90% of the biological growth was eradicated without the use of incremental chemicals.
2. Basin water is no longer murky and foamy.
3. Limescale stopped accumulating as soon as the *HydroFLOW* device was turned on.

Conclusion

Biological growth has been noticeably reduced with the installation of the *HydroFLOW* water conditioner. Biocide treatment should be continued in order to retard the growth of impurities introduced to the system because of its external exposure.

Limescale issues on the louvers, honeycomb fills and infrastructure have been reduced thanks to the *HydroFLOW* water conditioner. The cooling system's chillers will be examined during the annual maintenance routine, which will be performed in the latter part of the year. Bio-film and limescale deposits are expected to be minimal.



Referral Information

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