

case study

LAKOS Filtration Helps Environmental Agency Save Energy And Water

Houston, Texas

Application:	Cooling Tower Basin Cleaning
Solids:	Sand, Silt, Scale, Rust
Liquid:	Cooling Tower Water
Problem/Challenge:	Eliminate Downtime and Reduce Maintenance Costs While Keeping Cooling Tower Basin Clean

Problem: A leading environmental agency in the U.S. has access to all the latest research and an army of energy and environmental experts at its disposal. At its own facilities, Best Practices are not just followed, they are created.

When their Regional Laboratory in Houston, Texas was having a problem with dirty cooling tower water, their building management firm, DNA Partners, acted fast. The problem was leading to HVAC loop system downtime as well as escalated labor and maintenance costs. They needed a solution that would not only eliminate their dirty water problem, but also set an example of water and energy conservation.

Their original cooling tower basin was modified to include a slope leading away from the main system's pump suction in order to keep solids away from the supply line. This involved an energy consuming process and was only fixing part of the problem; the remaining solids would still gravitate toward the lowest points in the cooling tower.

This was all done in order to keep the solids out of the heat exchange process. When it started to directly contribute to a sharp rise in energy costs, Chief Building Engineer Dan Peronis looked to LAKOS for a solution.



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Solution and Results: By installing a LAKOS TCX-0280-SRV to the building's cooling tower, they were able to filter out the sand, silt, scale and rust that was clogging their system chillers and contributing to heavy solids loading at the basin sump. The LAKOS system eliminated the solids causing the problems and has allowed

the HVAC loop to operate at design parameters.



The LAKOS unit also utilizes a Solids Recovery Vessel (solids purge option) that captures solids in a sock filter allowing chemically treated and filtered water to be reintroduced to the system loop. This solution allows the Texas laboratory to tout a zero liquid loss approach to filtration.

With filtration now a part of their cooling system, the laboratory is able to better exemplify the agency's water conservation and energy savings standards. Additionally, the LAKOS installation has reduced maintenance and downtime costs.

“I'd been evaluating the centrifugal separator basin cleaning system for years,” said Peronis, “and now that I have one, it makes my job so much easier. It's not just about the money savings, it saves an enormous amount of time and water. *I love my LAKOS system, I don't know what I'd do without my separator!*”

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Separators and Filtration Solutions

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