

data center cuts annual water usage by more than 12 million gallons

enhanced water management solution includes GenGard* and sulfuric acid

challenge

The computers we use, the phones we live on, the apps we rely on – they have all become common place in our technology-driven world. Behind all these assets are countless terabytes of data powering our digital realm.

As our reliance on technology increases, so too do the prevalence of huge warehouse like facilities that house our precious data. These data centers require excellent and reliable cooling systems for efficient server operation. Maintaining the proper conditions requires a lot of water and treatment must be precise, as overheating can compromise internal components and lead to costly downtime.

With rising water costs a major expense, a data center in Illinois set out to employ a new process to reduce water and chemical consumption by enabling higher cycles in their cooling system.



solution

The data center turned to SUEZ and its comprehensive combination of chemicals, software, and industry expertise to devise a plan for increased efficiency.

SUEZ was already treating the center's cooling system influent with GenGard* GN8143, a patented alkaline cooling water treatment. Challenged to drive cycles in the system even higher, SUEZ started feeding sulfuric acid into the system to lower the pH and alkalinity, thus lowering the water's overall scaling potential. With this addition, SUEZ also changed the data center's oxidizing biocide from stabilized bromine to bleach to provide a higher efficacy for bio control at the lower pH range.

SUEZ installed a TrueSense* Ready-Set-Go (RSG) controller to monitor pH and feed the sulfuric acid into the cooling system.

results

The comprehensive water treatment solution developed for the Illinois data center has produced amazing results. GenGard GN8143, combined with sulfuric acid, 12.5% sodium hypochlorite, and Spectrus NX1100, lowered the influent's scaling potential. With this, cooling tower cycles were increased from 3.4 to 4.0 cycles to 7.5 to 8.0 cycles.

The amount of water needed to operate the system dropped dramatically. Water use for cooling tower blowdown decreased from 25 to 30 percent to 12 to 15 percent, resulting in over 12MM gallons of water saved, equating to roughly \$150,000 in associated costs savings.

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