

safe - reliable - cooling water reuse

Apogee*



the pinnacle of cooling water technology

ready for the resource revolution



For more than a century, SUEZ has provided sustainable solutions to help customers around the globe address some of the world's most pressing challenges. Today, SUEZ continues that commitment. We are a forward-thinking, thoughtful leader in developing the water, water recycling, wastewater treatment and process solutions our customers need to operate more efficiently and profitably while minimizing their environmental footprint. Our goal is to help industries thrive and communities prosper.



SUEZ's Apogee program helps customers streamline cooling tower functions and achieve optimal performance. Reducing water and energy demand, applying, monitoring and controlling chemistries, and helping ensure asset protection, Apogee enables customers to manage cooling water at maximum efficiency.

As pure water evaporates and removes the heat away from the cooling tower, dissolved ions like calcium and iron that came with the feedwater build up in the tower. With proper chemistry, these "solids" can be kept in suspension until they are removed from the tower by purging some of the water known as blow-down. Thus a balance—cycles of concentration—is achieved.



Apogee has the ability to:

- lower water costs by up to 25 percent
- help achieve higher LEED certification
- increase legionella control compliance
- decrease operating costs and energy demand
- provide ongoing quality assurance via reliable remote monitoring

All in a single economic and technology package.

helping cut costs and water demand

We understand the need to do more with less. While water demand and related water costs can be minimized by optimizing chemistry or water purification upstream of a cooling tower, these conventional solutions can be expensive and difficult to install due to their large footprint and utility requirements.

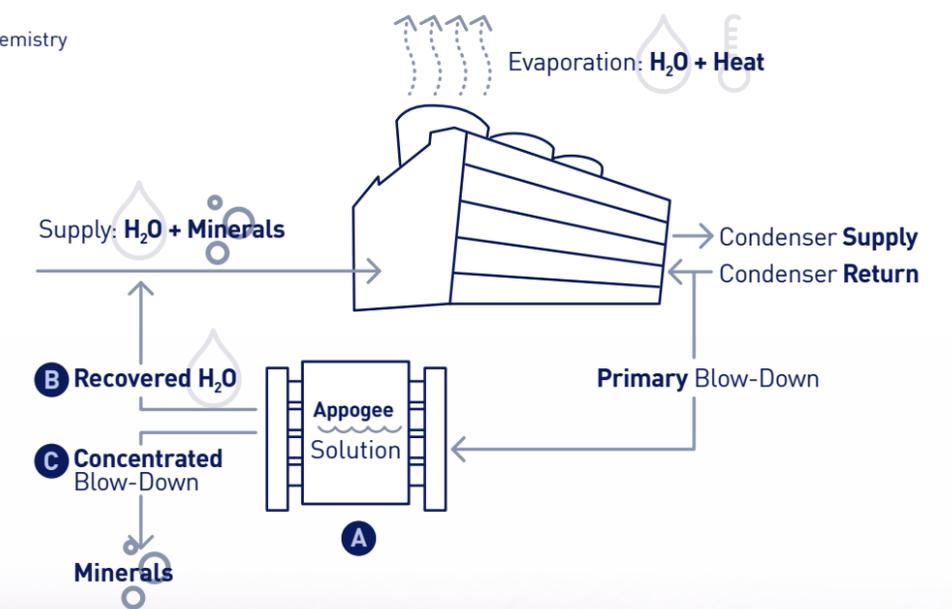
New lower quality or impaired makeup waters such as reclaimed industrial or municipal effluent ("purple pipe" water) may offer lower cost to attain, but often require higher operating technology to be used successfully. The Apogee solution can make using these waters viable.



how the Apogee solution works

Water from the tower blow-down is filtered and purified **A**. This purified blow-down water is returned to the tower for repeated use **B** and a concentrated blow-down is discharged in the normal fashion **C**. SUEZ's monitoring and controls ensure the water system chemistry optimize asset protection and minimize waste. Apogee combines the following SUEZ state-of-the-art technologies in an integrated solution to achieve the pinnacle of cooling water performance:

- ZeeWeed* hollow-fiber ultrafiltration
- Low fouling SUEZ reverse osmosis
- GenGuard* sensible and chlorine stable chemistry
- TrueSense* online sensor
- Water analytics
- Remote monitoring
- Wireless communication
- Water recycling and reuse
- Performance and cost reports





*Find a contact near you by visiting
www.suezwatertechnologies.com and
clicking on "Contact Us."*

**Trademark of SUEZ; may be registered in
one or more countries.*

©2017 SUEZ. All rights reserved.

GEA19849 Apr-12

