3D TRASAR™ System Assurance Center

24/7/365 Monitoring with Peace of Mind



The System Assurance Center is the global nerve center for Nalco Water's 3D TRASAR Automation Technology. The center takes the pulse of thousands of 3D TRASAR controlled water systems and sensors around the world. Staffed by more than one hundred highly skilled, degreed engineers, this team has a deep understanding of each application and technology.

The System Assurance Center maximizes the benefits of 3D TRASAR Technology and automation by:

- Monitoring system and critical asset performance 24/7/365
- Responding and troubleshooting alarms and resolving system upsets guickly
- Acting as an extension of local Nalco Water Representatives and site operations as an "extra layer of protection"

The use of data through automation also allows opportunities for optimizing performance and achieving operational goals as well as sustainability targets. These goals often involve water, energy or waste savings; production expansion; performance or product quality improvement; asset preservation; or Total Cost of Operations (TCO) reduction. The System Assurance Center, along with the local Nalco Water representative, ensures that best practices are maintained at each location or across the enterprise.

APPLICATION EXPERTISE COOLING BOILER DISSOLVED **MEMBRANES** WATER SYSTEMS AIR FLOTATION WORLD-CLASS 105,000 **CLIENT SATISFACTION** SYSTEMS GLOBALLY



BEGAN AS THE NALCO 360 EXPERT CENTER IN 2008



145 CHEMICAL ENGINEERS TROUBLESHOOTING ALARMS

ON DUTY 24/7/365 INCLUDING WEEKENDS/HOLIDAYS





CONTINUOUS REASSURING • RELIABLE



Peace of Mind From 24/7/365 Monitoring by 145 Trained Engineers







Added Support Augments Support of Local Nalco Water Representative



Goal Achievement

Synergy Helps You Achieve Your Goals



Unmatched Experience 10 Years of Proven Success/ Support 21,000 Systems



CASE STUDIES



While switching acid feed tanks, customer failed to follow established safety procedures, left acid feed pump in manual mode while responding to an emergency call.

3D TRASAR™ for Cooling Water controller sends low pH alarm to System Assurance Center.

AT RISK

- Critical Condenser assets
- Production run time
- Customer safety

ACTION TAKEN

- System Assurance Center notified local Nalco Water Representative.
- Plant operations notified, pump operation corrected.
- Local sales engineer directed customer to adjust blowdown and inhibitor feed.

RESULTS

- Prevented \$700,000 in replacement labor and material costs to condenser.
- Quick response prevented system downtime
- Escalated awareness of potential safety concern for customer.



Cooling System experiences sudden drop in Conductivity due to failed blowdown valve

3D TRASAR for Cooling Water controller sends alarm to the System Assurance Center during plant off hours.

AT RISK

- Customer sustainability goals
- Brand reputation

ACTION TAKEN

- System Assurance Center notified local Nalco Water Representative who in turn contacted the plant with detailed analysis
- Based on analysis, customer located defective blowdown value.
- Maintenance and repair performed

RESULTS

- Quick response prevents 16,000 gallons of water loss over weekend
- Prevents excess sewer costs

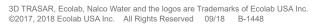




Nalco Water, an Ecolab Company

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SAFETY