

Innovative Cooling Tower Water Efficiency Technologies **RO Technologies**



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Today's Challenges

- Water – Scarcity, Demand, Future...
- Chemicals – Training, Handling, Disposal, Liability ...
- Health Risk – Exposure Skin, Eyes, Lungs...
- Environmental Risks – Streams, Rivers, Acquirers...
- Water Quality – Potable vs. Non-Potable
- Maintenance – Chillers, Heat Exchanger, Tower, Fill, Basin etc....

High Operating Cost & Potential Cost



Customer Wish List!

- Reduce Water Usage
- Reduce Maintenance
- Reduce or Eliminate Chemicals Usage
- Improve EH&S Conditions
- Lower Operating Cost
- Improve Efficiency
- Automated Controls and Remote Monitoring



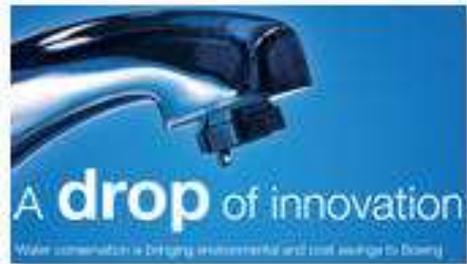
Answer! WCTI

- Water Conservation Technologies International
 - HQ's Temecula CA.
 - Dan Duke – Founder and CEO
 - World Wide Distribution Network
- Developed Natural Green Chemistry 2004
- 8 Years of Potable Water Applications
- 5 Years of Recycled Title 22 Waste Water
- Over 400 Customers

Awards and Recognition



10 Technical White Papers
Published and Peer Reviewed
2006, 2007, 2008, 2009



Published and Recognized
Boeing Frontiers Oct 2009



June 8th, 2010
One of Top 50
Water Technology Companies



How the WCTI Program Works

- Remove Hardness
 - Pre-conditioning system removes scale forming ions from tower make-up
 - Less Than 0.5 PPM of Hardness
 - Operating Conditions (Tower Water LT 30 PPM)
- Create Corrosion Inhibitor
 - Polymerized silica protects metals at high TDS
- Create Biocide
 - High TDS and pH prohibits bio & pathogen growth



Advantages of WCTI Process

- Water Conservation – Avg. 30% reduction
- No Hazardous Chemicals
- Improved Corrosion Control
- Naturally Bio-Static
- No Scaling Potential
- Simple to Operate and Maintain
- Potable and Reclaimed Water
- ***Fast ROI – Water Saving Alone!***

WCTI – HES Units



Dual Alternating
High Efficiency Softeners

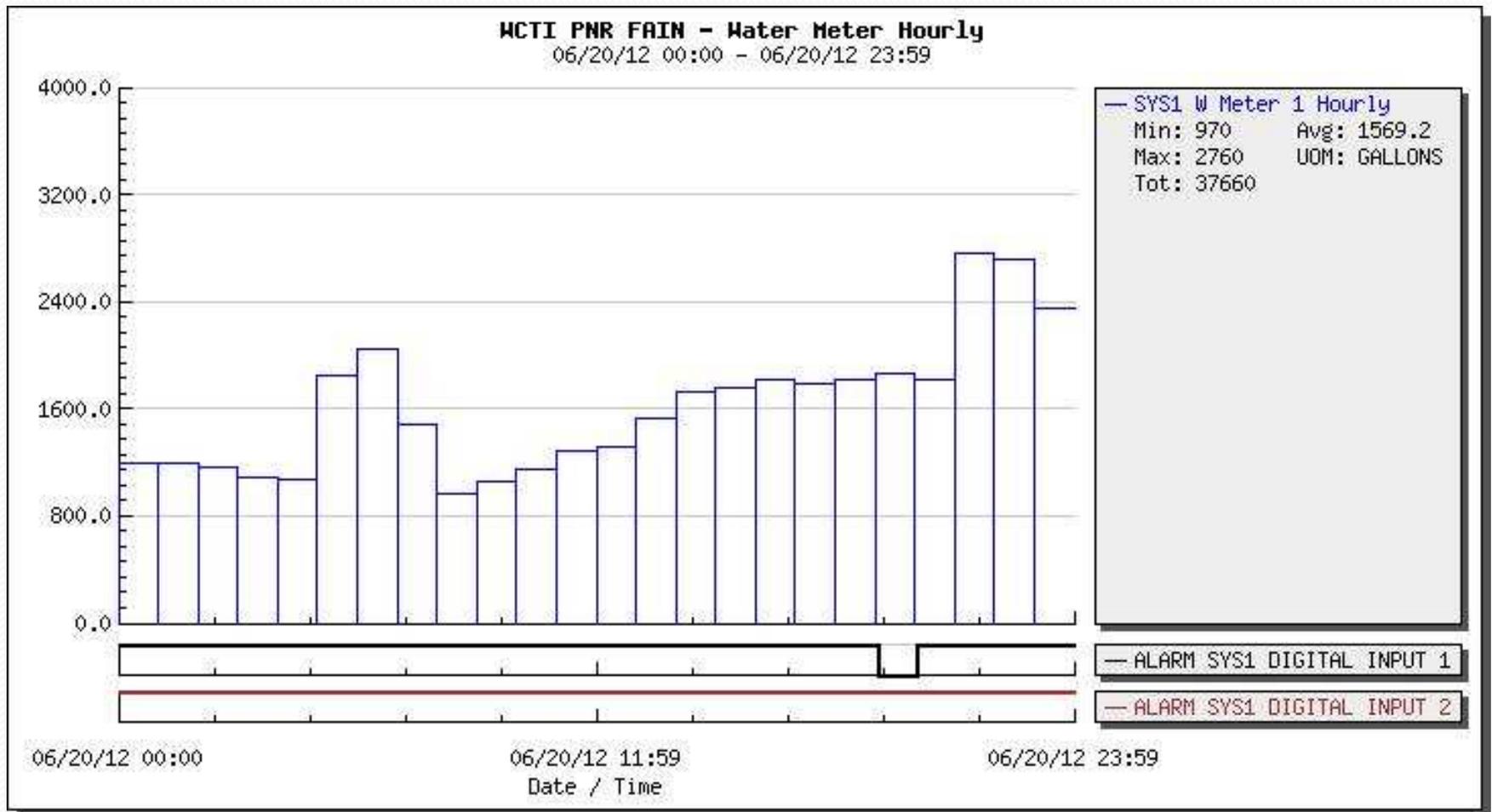
WCTI – HES & HEF Units



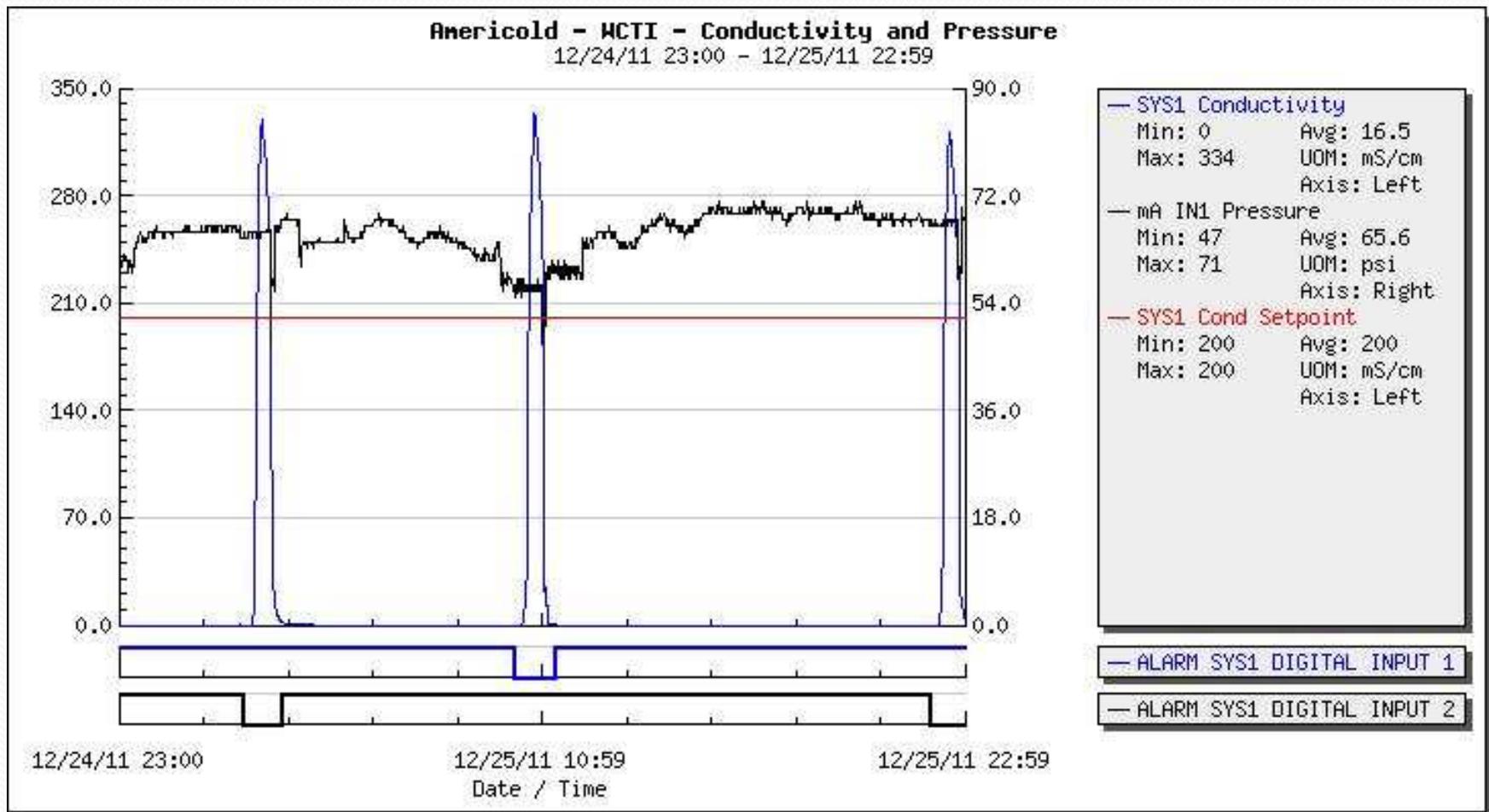
Dual Alternating
High Efficiency Filters

Dual Alternating
High Efficiency Softeners

Monitor - Water Use



Monitor - Regeneration Cycles



Ammonia Condenser Tubes

Prior to WCTI Technology



Ammonia Condenser Tubes

WCTI Technology in Use



Ammonia Condenser Tubes

18 Months in WCTI Program



Tower Condition – Excellent!

10 Months - Reclaimed Water - No Chemicals.



Basin Condition – Excellent!

10 Months - Reclaimed Water - No Chemicals.



Heat Exchanger – CoGen Plant

Chemical Program
Scale formed after 3-4 months

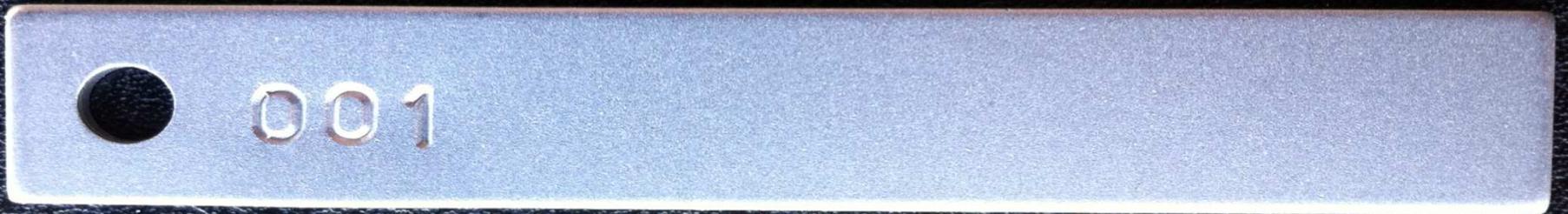


Heat Exchanger after 18 mo.
with WCTI process!

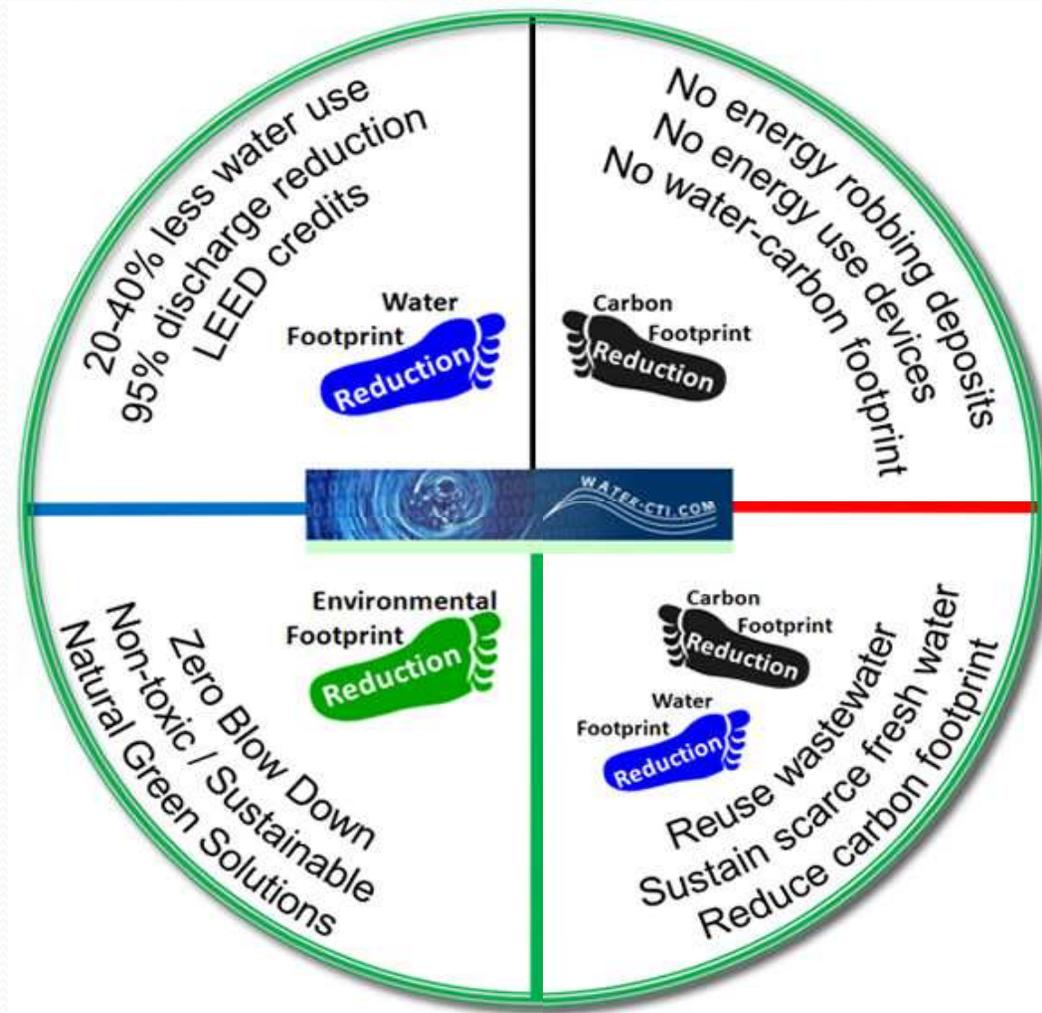


Corrosion Coupon Study

Carbon Steel Corrosion Coupon
30 Day Study
>.02 MPY



WCTI Process Impact





Thank You!

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