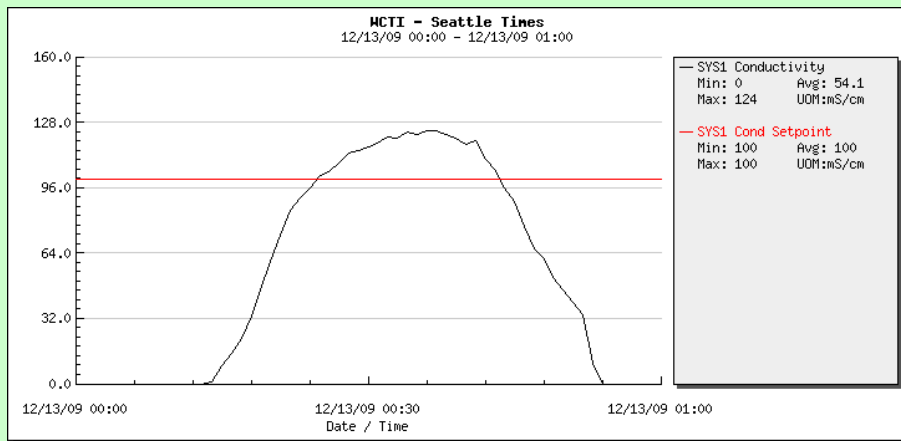# REMOTE PERFORMANCE ASSURANCE (RPA)
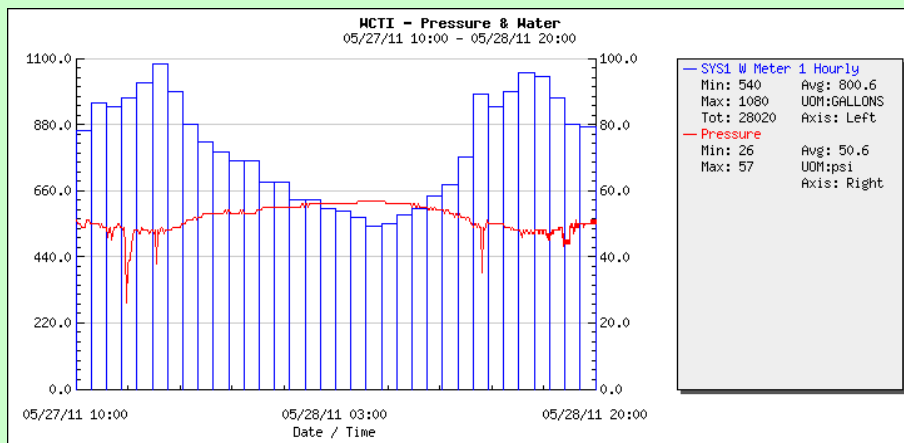
On Line Remote Monitoring of High Efficiency Softening (HES)
Program Assurance for Zero Blow Down Cooling Tower Operation

➢ **Automated data transfer; Local Internet server or wireless connections**

➢ **Monitors each HES regeneration, emails brine strength failure alarm**

➢ **Monitors makeup water usage and water pressure, emails low pressure alarm**

RPA System Description

The RPA system provides 24/7 online monitoring of each regeneration process and tracks tower makeup water consumption through WCTI High Efficiency Softener (HES) equipment. Cutting edge HES / RPA technology assures performance reliability for zero blow down operation of cooling tower systems. The RPA system uses state of the art online communication and remote server software to monitor conductivity throughout the regeneration and sends an alarm to service staff in the event of a failure that will lead to short service runs and hardness leakage. RPA eliminates hours or days to perform traditional performance studies and troubleshooting analysis. Continuous analysis supports proactive response to assure reliable cooling and water conserving operation. Regeneration process, water pressure and water consumption rates can all be compared to assess operational performance. RPA includes on-line monitoring of the critical HES reliability functions 1) regeneration brine strength, 2) water pressure, 3) metered flow, and 4) power loss.

Automated Regeneration Analysis, Water Pressure, Metered Flow, and Power Monitoring:

The WCTI RPA system will permit remote monitoring of the change in conductance throughout the HES regeneration process to provide performance analysis and assurance of reliable operation. The system provides an alarm communication when a pre-set minimum conductivity level is not achieved during the regeneration process that will permit proactive corrective response. This system includes controller, sensor, data logging and data transfer functions. The sensor is specifically designed for inline (fouling resistant) conductivity measurement of high TDS water.

Data is transferred and logged on a free remote data server for continuous access of history and analysis. Automated data transfer for remote data management is provided via local internet server or wireless communication options. Data management / tracking software is provided with the central server for performance analysis and download of reports. The HES built in water meter and water pressure data is also logged into the controller and server for operational monitoring and troubleshooting analysis. Loss of power, low water pressure and other monitoring and alarm functions are also provided. Ethernet or wireless communication service for data transfer to the server is not provided.

MegaTron / Web Advantage / RPA

The MegaTron makes continuous monitoring of HES softening systems easy with a user friendly ATM style menu and a large 16 line full graphic display that allows complete programming from the keypad. Each RPA unit can be specifically configured with the functions needed for HES applications, alarms and reporting.

Web Advantage

- Allows *staying connected to all your on-line MegaTron units at one time by Internet*.
- Uses the latest, reliable, secure server technology for connection, control and history management.
- Email alerts from Web Advantage keep users informed of *alarm conditions*, including disconnection and power loss encountered by the remote MegaTron.
- Constant Server Monitoring, Server Stored History, No Software Needed