

Customer XYZ

Recorded By: **Doug Leinenwever**

On-site: **8:00 AM to 10:00 AM EDT**

Data Center - Chiller Plant				
Test	Well MU	Tower	Chiller 1	Chiller 2
Conductivity (as mmhos)	668	1934		
Limits	1000 max	1950 - 2050		
Setpoint, Conductivity		2000		
Limits		1950 - 2050		
pH		8.70		
Limits		8.5 - 9.05		
Hardness, total (ppm as CaCO <sub>3</sub> )	320	940		
Limits	400 max	900 - 1500		
Hardness, calcium (ppm as CaCO <sub>3</sub> )	200	560		
Limits	350 max	550 - 1250		
Alkalinity, M (ppm as CaCO <sub>3</sub> )	140	390		
Limits	10 - 250	250 - 500		
Inhibitor		3.5		
Limits		3.5 - 5		
 Conductivity Cycles (Calculated)		2.9		
Limits		2.5 - 4		
 Hardness Cycles (Calculated)		2.9		
Limits		2.5 - 4		
 Calcium Cycles		2.8		
Limits		2.5 - 4		
 Alkalinity Cycles (Calculated)		2.8		
Limits		2.5 - 4		
Temperature		120		
Limits		120 max		
 LSI (Calculated)		2.5		
Limits		1.75 - 2.9		
Pump Setting, Biocide 1 Stroke		360		
Limits		260 - 360		
Time, Biocide 1 (minutes)		40		
Limits		35 - 45		
Pump Setting, Biocide 2 Stroke		360		
Limits		355 - 365		
Time, Biocide 2 (minutes)		30		
Limits		25 - 35		
Meter, Make Up	25998700			
Limits	0 - 99990000			
Meter, Condensate		227444.3		
Limits		1000 - 1000000		
Hours			72816	77659
Limits			42500 - 92500	44000 - 94000
Amps			0	60
Limits			100 max	100 max
Temperature, Cond In				77
Limits				50 - 90
Temperature, Cond Out				84.7
Limits				50 - 110
Temperature, Evap In				51
Limits				40 - 55
Temperature, Evap Out				45
Limits				42.5 - 47.5

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Condenser Approach	Limits			3.9 2 - 8
Pressure, Cond	Limits			19.1 10 - 25
Tons	Limits		850 825 - 875	850 825 - 875

### Well Make Up

Online 

#### Meter, Make Up

18596700g + 7402000g = 25998700g

### Cooling Tower

Online 

The controller was confirmed to be in calibration.

#### Hardness, total (ppm as CaCO<sub>3</sub>)

Cycles are not going to run as expected with the softener providing soft water. Because of the interruption of soft water we have higher hardness than traditionally found with a soft water program.

#### Meter, Condensate

91277.2 + 59656.1 (76511) =

### Chiller 1

Online 

Chiller 1 was idle during todays service visit.

### Chiller 2

Online 

#### Amps

The amps are represented in percentage.

### Closing Comments

Call me with any questions or concerns. I am always happy to help anyway I can.

Thank you.

Doug Leinenwever

904.386.4956 cell