

RFI Q&A #2

1. What is the tonnage (or recirculation rate) of the cooling tower(s).
2. What is the run time (hours per day estimated and how many chillers online)
3. What is the volume of the closed loops (estimated), do you have water loss problems in the closed loops?
4. Also, would you happen to have a city water analysis you can send us, or if you know the conductivity, total hardness and total alkalinity we can do the calculations.
5. Lastly, do you have feed and control equipment now in place, does it stay if you do or do we have to replace?

VA Response:

Palo Alto location - The tonnage is 2500. Run time depends on ambient temperature; generally the system is off from late evening until the day begins to heat up. The chillers are staged to come on as heat load requires. The pipe size to the chillers is approximately 24 inches supply and return over an estimated 150-200 ft. run. We don't normally experience water loss from the towers except through evaporation. Water Standards can be obtained from the City of Palo Alto Utilities website. The water is of very good quality with minimal hardness. The feed system would have to be provided by the vendor.

Menlo Park location - For MPD 334 is 227 ton the rest is set up is same as PAD. No water loss, no city analysis. Yes it has feed system.

For 347 the following information as far as the system I could find is the following: induced draft, counterflow design closed circuit cooler with a capacity range of 85 to 46,667 MBH (24 to 13,664 kW). Standard construction includes the patented, high efficiency Thermal-Pak® Coil and G-235 (Z-725 Europe) galvanized steel casing and basin. No water loss, no city analysis. Yes it has a feed system.

Livermore location - In Bldg. 62 Chillers, I have 3 - 60 tons chillers with individual cooling towers (3 EVAPCO Cooling Towers). I don't know their individual capacity or tonnage of the towers but here is their **Model # EVAPCO LSTA-493**. This towers are open loop and they have a common header that connected to each tower. Chillers are outside air temperature enable set point @ 56 F. At about 90 F and up, all 3 chillers are on line maintaining a chilled water return temperature set point. We have no apparent leaks and loose water only through evaporation. I also don't know their run hours. Also Chillers are controlled thru Johnson Control Metasys System.

In Bldg. 90 I have 2 – 60 tons Chillers with one share Cooling tower. This is a closed loop. The Cooling tower is a Baltimore Coil Company **Model # BAC-FXV-\$\$\$-LOX, SERIAL # UO36704301MAD**. Also I don't know the tonnage or capacity. Chillers are also Outside air temperature enable set point @ 58 F. One or both systems run together to maintain chilled water supply set point @ 45 F. I don't know the water loss problem since no visible leak is present on our piping.

The water standards can be obtained through ZONE 7 water which is the water dept for the Livermore area. The feed system will also need to be provided by the vender.