# Instruction for operating RoMag’s sleep mode

### December 8th 2023

1. Monitoring via VNC viewer (every 30min for monitoring emails, a few times a day for the following)
   1. RoMag-PC
      1. Temperature timeseries of all the thermistors
      2. Especially the temperature at expansion tank
      3. Power measured at the shunt/voltage divider
   2. Fumehood-PC
      1. Web cams for quick visual check of the apparatus and chiller temperature
2. Checking every 48-72 hours
   1. The water level in the chiller reservoir, it should be <1cm from the metal frame. If lower, refill with DI water (the taller faucet at the foyer sink)
   2. Any water leaking below the electronic deck
   3. Any weird noise from the chiller loop and/or rotary union below the deck
   4. Holiday Emergency Heating System (HEHS) should be off
3. Protocol
   1. If anything goes wrong, contact Yufan Xu at (608)886-7181, or email [yufanxu@g.ucla.edu](mailto:yufanxu@g.ucla.edu),
   2. Contact building manager Eric Wessenauer ([ericw@epss.ucla.edu](mailto:ericw@epss.ucla.edu)) for assistant.
   3. In danger, turn off electric breaker switchs, dial 911.
4. Troubleshooting

| Step # | Issue(s) | Solution |
| --- | --- | --- |
| 1a,i,ii | Temperature below 30C (except for room temp) or change abnormally | If it’s below the expansion tank, the HEHS should turn on and heat the tank to above 30C. Adjust the set point of the emergency heater if it’s still below 30C.  If the expansion tank thermistors show below 30C, twist the nob slightly (back and forth) on the heating tape next to the expansion tank. It should not exceed 70C. |
| 1a,iii | The power is 0 or abnormally high. | Try to run Romag controls.vi with a non-zero power input.  If not working, restart heat pad power supply (Argentix).  If still not working. Turn off the power supply. The HEHS should turn on. We will fix it after the AGU. |
| 1b | The chiller is not working, or dramatically different from the set point. | Run Romag controls.vi with 35C input for chiller.  If not working, shut off the valve and restart chiller. Slowly turn on the valve to let water flow again. |
| 1b | Smoking, fire, dramatic water leak | Contact Yufan Xu and Eric Wessenauer for further assistant. |
| 2a | No DI water | Contact Eric Wessenauer |
| 2b,c | Water leak-small pond | Mop the water, and check where the leaking is coming from. If small, ignore. Clean every few days. |
| 2b,c | Water leak-significant | For significant water leak, contact Yufan Xu and Eric Wessenauer. |
| 2c | Unknow noises | Contact Yufan Xu |
| 2d | HEHS is on (two red LED lights) | Somewhere in the system (except for the expansion tank) is below 30C. |
| 2d | HEHS doesn’t work | Long press “set” until the temperature flashes, increase/decrease the set point accordingly. Usually set to 32C.  Check battery percentage. The battery can only last for ~2-3days in case of large-scale black out. |