

1. SCOPE

- This SOP outlines the steps required to switch the cryogen compressor to city water bypass in the event of a facility chiller shutdown.

2. PROCEDURES

a. Location

- The equipment room designated for this procedure is 2245C.
- If the equipment room is locked, the key is in the cabinet above the sink in 2245.

b. Personnel

- This procedure should only be undertaken by those who are confident. Otherwise, please contact a TIRF facility staff member.
- Notify the 3T MRI facility manager or facility director of procedure commencement.

c. Heat Exchange Cabinet (HEC)

- HEC power should be kept ON ensuring power is provided to the cryogen compressor (Fig 1).



Figure 1

d. Chiller Shutdown

- Shutdown Chiller Pumps:
 - Turn off chiller pumps 1 and 2 using either of the following methods:
 - Switching the respective switches to the off position
 - Pulling down the lever associated with each pump.



Figure 2.1

- Chiller Valve Shutdown:
 - Turn Valves 1 and 2 into the closed position (horizontal handle) as shown in Figure 2.2 and 2.3.
 - Valve 1: Controls the supply from the HEC to the cryogen pump.
 - Valve 2: Controls the return from the cryogen pump to the HEC.



Figure 2.2



Figure 2.3

e. Open City Water

- Move the city water valve (labelled as valve #3) into the open position (vertical handle) as shown in Figure 3.1.



Figure 3.1

- Ensure valves labelled D and E are open to facilitate the drainage of city water.
- Open valve D by turning handle fully counter clockwise (Fig 3.2).
- Valve E is opened by turning the green handle parallel to the pipe below it. The green handle has been removed to prevent accidental release of glycol and has been fixed to the pipe (Fig 3.3).
- Check for city water flow into drain (red hose from D).



Figure 3.2



Figure 3.3

f. Compressor Check

- Ensure compressor is running and cold head is making chirping sounds.
- If necessary, toggle the switch on the cryogen compressor off and back on after switching to city water to reset after an interruption of flow (Fig 4.1).
- Confirm the flow of cool water through the compressor's supply line (Fig 4.2).



Figure 4.1

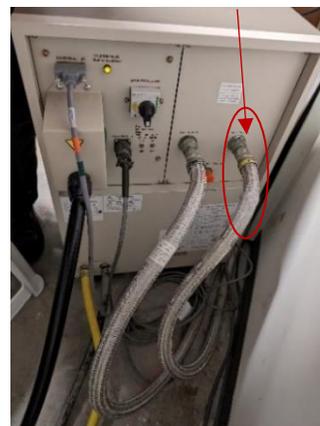


Figure 4.2