MANUAL PUMP-DOWN PROCEDURE FOR MRC SPUTTERING SYSTEM

1. Check the chamber pressure gage and make sure MRC status is OK (e.g.: is it on high vacuum, is anyone using it?).
2. Close HIGH vacuum valve. Wait for 5 sec.
3. Press VENT to begin venting the chamber. It is important that the high vacuum valve is closed before this, otherwise the nitrogen will flow into the cryo pump, and the system will need regeneration.
4. When the chamber has reached atmospheric pressure (nitrogen is coming out through the gap) stop venting, open the chamber, change target if needed, place devices, and close the chamber.
5. Open the ROUGH valve to begin mechanical pump down of the chamber. It will take several minutes. At the beginning the pressure gage won't show any values, but once it starts, it will go down quickly. It should not take longer than 10 minutes. When the pressure reaches 200 mtorr close the ROUGH valve. Do not leave the system during the rough pumpdown. CAUTION!! LEAVING THE ROUGHING VALVE OPEN FOR EXTENDED PERIODS WILL CONTAMINATE THE SYSTEM WITH OIL FROM THE MECHANICAL (ROUGH) PUMP!!
6. Wait for 5 sec. after closing the ROUGH valve and then open the HIGH vacuum valve. It is important that the ROUGH valve is closed, other wise the oil in the mechanical pump will flow in to the cryo pump.
7. Wait for base pressure needed, close the throttle, open argon flow and begin sputtering procedure.
8. If the cryopump is not cold as indicated by the green light or if a base pressure of less than $4x10^{-6}$ is not reached the cryopump may need regeneration or the system may have a leak.

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