

Liquefier System Shut Down

Rev. Dec.03

1. Record the Data.
2. Push the Purifier Control OFF
3. Wait for the Purifier ON light to go out completely. ~7 1/2 minutes
4. Push the LN₂ Control OFF
5. Put on ear protection
6. Push the Engine Control STOP
7. Move the PS35 high set point to 3 psi and the low set point to 2 1/2 psi
8. Wait as much as ~ 15 minutes for the excess gas to be recompressed into the Medium Pressure Tank
9. If the Medium Pressure Tank is not above 150 psi, toggle the V309 switch up
10. Wait as much as ~ 15 minutes for the Medium Pressure Tank to reach ~230 psi. (It might not get to 230psi) At 15 minutes or 230 psi or no more gas available, toggle V309 down.
11. If storage dewar pressure is above 5 psi. Toggle V309 up until pressure drop below 5 psi. Then toggle V309 down
12. Press the Compressor Control #1 STOP wait ~ 2 minutes
13. Close valve on medium pressure tank
14. Close yellow handle valve inside liquefier. (Near V634)
15. Close red handle valve on back of the liquefier - control pressure for JT valve
16. Loosen the RDT upper knurled nut
17. Close the valves on the 3 K-bottle valves
18. Close three screw compressor cooling water valve
19. Switch off the screw compressor module power at the disconnect switch
20. Set up the GN₂ purge of the purifier section
 - a. Rotate the GN₂ 3way valve to point right
 - b. Open V640 (Blue handle)
 - c. Open the GN₂ needle valve/flowmeter 1/2 turn set flow to 10 scfh
21. Toggle V312 switch up
22. When PI-34 reaches ~0 psi and 1000 liter storage dewar is below 5psi, toggle V312 switch down
23. Record the hourmeter readings for the liquefier and screw compressor modules in the datalog as well as the dewar level and pressure
24. Switch off the liquefier module power at the disconnect switch
25. Reset PS35 high set point to 4 psi and the low set point to 3 psi
26. Close Pure (Yellow pointed) and Impure (Black pointed) Feed valves at the Gasboard
27. Close the LN₂ manual valve on back of the liquefier
28. Close 5 extra valves.
29. Rotate new 3-way valve to point away from V312.
30. Move recovery line from V312 to the new 3-way valve.
31. And / or remove / raise the RDT.

For unattended shut-downs;

1. If leaving it off, proceed from step 11 or 12 depending if the screw comp shut itself down.
2. If restarting, Find a cause for the shut-down and correct it.
3. Goto step # 8-11 on the start-up instructions.
4. Skip 12-17, Do 21-25
5. Skip 26-31, continue from 32.