

Tasks required to complete the purity test station...

- **Complete LN2 transfer line that runs from dewar outside PAB to condensers.**
 - Bob Kubinski is 50% done but has been at D0 whole time the Tev has been down.
 - Estimate as 3 weeks for him to finish transfer line.
- **Finish LN2 dewar installation**
 - Refurbish and rebuild manual valves, regulators, and trapped volume relief valves.
 - Send out primary relief valves to be certified.
 - Install hand dewar fill station.
 - Find and install vaporizer for PAB gas use.
 - Install new level and pressure transmitters.
 - Prepare safety documentation.
 - Estimate as 5 weeks tech effort, two weeks engineering effort.
- **Finish p-bar cryostat internals.**
 - This is 80% done now.
 - Pieces have to be cut to their final lengths and leak checked.
 - Vacuum and pressure instrumentation has to be attached.
 - Relief valve has to be sent out to have the set point raised.
 - Purity monitor has to be integrated.
 - Estimate the above as 2 weeks tech effort, 1 week engineering effort.
- **Design and fabricate new wide mouth cryostat internals.**
 - Flange fabrication is underway and will be done in a couple of weeks.
 - Estimate as 2 weeks engineering effort to design.
 - Estimate as 6 weeks tech effort to fabricate internals once designed.
- **Fabricate rack and piping to integrate new O2 monitors into system.**
 - Estimate as 6 weeks tech effort, 1 week engineering effort.
- **General piping work**
 - Piping between cryostats, sample lines, vacuum lines, etc.
 - Estimate as 4 weeks tech effort, 1 week engineering effort.
- **Wire controls, program iFix, and program PLCs.**
 - Some of the wiring for heaters has already been started by Chuck McNeal under Dan Markley's direction.
 - Dan Markley is working on the wiring diagrams.
 - Terry and Dan have to program iFix and the PLC.
 - Estimate as 6 weeks tech time.
 - Estimate as 6 weeks engineering effort.
- **Overall system safety documentation**
 - Estimate as 3 weeks engineering effort.
- **Money???**
 - A lot of things we need were purchased last year.
 - But without having a complete plan then, many things were overlooked.
 - I estimate \$25k could easily be spent finishing the above items.