

- Hazards associated with the gas shack and how to mitigate them
- Do not enter the gas shack if the rotating red light at the entrance is on. This warns of an oxygen deficiency.
- **In General the Gas Mixing shack can be a hazardous place – BE AWARE OF YOUR ENVIRONMENT.**
- There are hazardous gas detectors that will cut off any gas flow at 10% of the lower explosive limit and oxygen deficiency monitors that will alarm if there is a less than 19% oxygen level.
- **There is a marked step up both on to the gas pad and into the gas shack.**
- Be aware. It easy to trip while making a step into empty space when coming out of either one.
- Hazards associated with working in IR-2: See https://www-internal.slac.stanford.edu/esh/general/hazanalysis/aha_docs/AHA-IR2-BaBar.pdf.
- If there is isobutane in the gas system, possible flammable gas may be vented into IR-2.

Replacement of the He Security Line Regulator

This procedure is used to replace the He security line regulator (“Dungs”) in rack on top of the BaBar detector.

Names: _____

Date: _____

Preliminary

- Get work authorization from BaBar management.
- The DCH gas system may enter alarm mode; make people in the control room aware of this.
- Check that Rest Mode light on electrical rack in the gas shack is on.
- Check that the HAD in the return line reads >10% LEL; if not, the gas system must be purged. See http://www.slac.stanford.edu/BFROOT/www/Detector/CentralTracker/safety/isobutane_to_helium.pdf.

- Close the He security line valve, VVM- 34 in rack 636-06 (in the gas shack).
- Reduce FPR-1, in rack 10, to 0.
- Close the He security line valve, VVM- 300 in rack 10.
- Remove the Dungs regulator, FPR-2.
- Install new regulator; set to approximately the same pressure as the old one.
- Open VVM-300.
- Set FPR-1 to ~0.15bar.
- Open VVM-34.
- Wait until the DCH pressure stabilizes; adjust FPR-2 so that the DCH pressure is ~ 3mbar.
- Reset system to rest mode, if necessary.
- Check for leaks with He sniffer.