Tunnel Gun Vacuum/Bake Procedure

* Switch beamline valves to shut/override
* LOTO laser
* Attach pump and pump/backfill 3x
* Vent chamber to atmospheric pressure, then turn off nitrogen purge
* Open flange, turning nitrogen purge back on as flange begins to vent
* Do vacuum work (changing stalks, pucks, other gun parts)
* Rough down chamber
* If large flanges have been opened, it may be necessary to activate NEGs 16 A for ~20 minutes to get ion pump on
* Turn on ion pump controller for both bake (overboard) and gun pumps
* Pump out NF3 lines
* Leak check with RGA once pressure is ~500 uA
* If time permits, pump overnight and leak check again (save RGA trace, log pressure)
* Remove RGA, Cesiator hardware
* De-energize magnets
* Remove corrector magnets from NEG tube
* Wrap exposed electronic leads, windows and NEG tube with foil
* Wrap beamline valve and NEG tube with heat tape
* Attach thermocouples:
  + control and monitor on beamline valve
  + control and monitor on NEG tube
  + control and monitor on valve next to overboard/bake pump
  + master control for heat tape box on 10”-4” reducer flange
  + master control for bake on window flange
  + monitor for bake on 13.25” flange
* Compressed air for cooling on beamline valve
* Nitrogen to stalk flow interlock on main bake controller
* Program heat controller for desired bake (12 hrs to 250C, 36 at 250C, 4 to 120C, 4 at 120C, 4 to 20 C typical)
* Wrap beamline valve, NEG tube in fiberglass insulation and cover in foil
* Install oven, heater and diffuser panels as needed
* Cover with fiberglass blanket
* Turn off gun pump (in hot zone) either at beginning or at 120C
* Plug in blower
* Turn on heater
* Record temperatures/ion pump current on webdaq if desired
* On ramp down at 120C, turn on gun pump and close valve to bake pump. 08April2002 M. Stutzman revised 11June2008

Tunnel Vacuum/Bake Quick Checklist

* Secure HV leads
* Shut/Override on Valves
* LOTO Laser
* Do vacuum work
* Pump out NF3
* De-energize magnets before disconnecting

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Initials: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_