

Safety Checklist for Beam line X-11B

1. _____ Front end pressure (displayed in rack on shield wall on X-11A side of beamline) must be $< 2 \times 10^{-9}$.
2. _____ Valid padlock checklist posted on X-11B hutch door.
3. _____ Exclusion zone #1 in place and secure.
4. _____ G-P valve 1B in open position.
5. _____ Exclusion zone #2 in place and secure.
6. _____ Bremsstrahlung shield #1 in place and banded.
7. _____ Lead shielding of bellows #1 in place and secure.
8. _____ G-P valve 2B in open position.
9. _____ Lead shielding of slit assembly tank, exclusion zone #3, in place and secure.
10. _____ Bremsstrahlung shield #2 in place and banded.
11. _____ Lead shielding of Be window in place and secure.
12. _____ Lead shielding of 3-way cross in place and secure.
13. _____ Lead shielding of bellows #2 in place and secure.
14. _____ Lead shielding of 5-way cross in place and secure.
15. _____ Lead shielding of monochromator in place and secure.
16. _____ Lead shielding of reducing spool in place and secure.
17. _____ Lead shielding of 5-way cross in place and secure.
18. _____ Water is flowing through all water-cooled components (check for green lights displayed in rack located downstream of mono).
19. _____ Gate valves #3-5 are open (check for green lights displayed in rack located downstream of monochromator).
20. _____ Lead shielding of bellows #3 in place and secure.
21. _____ Bremsstrahlung shield #3 in place and banded.
22. _____ Lead shielding of photon shutter in place and secure.
23. _____ Bremsstrahlung shield #4 in place and banded.
24. _____ Lead shielding of bellows #4 in place and secure.
25. _____ Lead shielding of bellows #5 in place and secure.
26. _____ Lead shielding around transport pipe (inside hutch) in place and secure.
27. _____ Beam stop at back of hutch in place and secure.

Signature: _____ Date: _____

Op Co Signature: _____ Rev. Jan.2004