

X21A1 SAFETY CHECKLIST			BROOKHAVEN NATIONAL LABORATORY NATIONAL SYNCHROTRON LIGHT SOURCE
Rev: D	Effective: 5/24/2010	Page 1 of 1	Number: LS-SCL-0087
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Original signatures on file.

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- 1. Valid Padlock Index and log, no locks open
- 2. Exclusion Zone (EZ # 1) between the front end and the graphite tank in place and secure.
- 3. Lead wrapped around graphite filter tank as per photo, and view port covered with leaded glass.
- 4. Water cooled Beryllium window #1 and cross piece wrapped in lead.
- 5. Exclusion Zone (EZ # 2) in place and secure
- 6. Lead shielding covering burst disk.
- 7. Lead shielding on Monochromator #1 including leaded glass on view port.
- 8. Exclusion Zone (EZ # 3) in place and secure
- 9. Bremsstrahlung shield (BS #1) in place and banded, as per photo.
- 10. Lead wrapped around front face of Monochromator tank # 2 as per photo, and lead glass covering view port secure.
- 11. Exclusion Zone (EZ # 4) in place and secure.(note: BS #2 inside EZ #4)
- 12. Monochromator #3 view port wrapped in lead and covered with leaded glass.
- 13. Exclusion Zone (EZ # 5) in place and secure.
- 14. Lead wrapped around 2 view ports secure (top of the mirror tank)
- 15. Exclusion Zone (EZ # 6) in place and secure.
- 16. View ports(8) on Mirror Tank #2 covered in lead
- 17. Exclusion Zone (EZ # 7) in place and secure.
- 18. View port covered with leaded glass, in place and secure.
- 19. Vacuum Bellows #7 wrapped in lead.
- 20. Bremsstrahlung shield (BS #3) in place and banded, as per photo.
- 21. Photon Shutter wrapped in lead as per photo
- 22. Vacuum Bellows #8 wrapped in lead.
- 23. Beam pipe and interlock cables locked in place in the X21A3 hutch
- 24. Vacuum Bellows #9 wrapped in lead
- 25. Exclusion Zone (EZ #8) in place and secure
- 26. Vacuum Bellows # 10 wrapped in lead.
- 27. Exclusion Zone (EZ #9) in place and secure.
- 28. Bremsstrahlung shield (BS #4) in place and banded, as per photo.
- 29. View port covered with leaded glass, in place and secure.
- 30. Beamstop in X21A1 hutch in place and secure, as per photo.

OPCO / Beamline Staff: _____ Date: _____

User System Checks

- A. User interlock indicates all valves open.
- B. User interlock indicates sufficient water flow.
- C. User interlock indicates cooling of monochromator running.

Beamline Rep.: _____ Date: _____