

<b>X19C SAFETY CHECKLIST</b>			BROOKHAVEN NATIONAL LABORATORY NATIONAL SYNCHROTRON LIGHT SOURCE
<b>Rev: C</b>	<b>Effective: 5/24/2010</b>	<b>Page 1 of 1</b>	Number: LS-SCL-0043
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1. Valid Padlock Index and log, all padlocks closed

**2-12 ARE TO BE CHECKED BETWEEN X19 AND X20**

2. Exclusion Zone (EZ #1) X19A/X19C in place and banded as in photo 1.
3. Bremsstrahlung shield (BS #1) in place and banded as in photo 1.
4. Vacuum Bellows (VB #1), Water cooled Beryllium window (BW #1), Exclusion Zone (EZ #2) in place and banded as in photo 2.
5. Bremsstrahlung shield (BS # 2), Vacuum Bellows (VB #2) wrapped in lead and banded as in photo 3.
6. Phosphor screen chamber (PS #1) wrapped in lead, Viewport on PS #1: front vp covered with lead glass and clamped, back vp covered with lead and clamped as in photo 4.
7. Lead Exclusion Zone (EZ #3) with Vacuum Bellows #3 inside of EZ #3. Bremsstrahlung shield (BS # 3) in place and banded as in photo 4.
8. Slit box and viewport wrapped in lead and banded (on back side) Vacuum Bellows #4 wrapped in lead and banded and Scatter Shield as in photo 5.
9. Mirror tank and 4 Viewports with lead glass wrapped in lead and banded as in photo 6.
10. Bremsstrahlung shield (BS # 4) in place and banded as in photo 7.
11. Vacuum Bellows #5 wrapped in lead, Phosphor screen chamber (PS #2), Viewport on PS #2: front and back covered with lead glass and clamped as in photo 8.
12. Vacuum Bellows #6 wrapped in lead and banded.

**13 AND 14 ARE IN X19A HUTCH**

13. Lead shielding for X19C pipe, at X19A upstream wall as in photo 9.
14. Slit assembly wrapped in lead, and viewport covered in lead glass, Vacuum Bellows #7 wrapped in lead and banded as in photo 10.

**15 IS IN THE X19C HUTCH**

15. Vacuum Bellows #8 wrapped in lead

**16 IS OUTSIDE OF THE X19C HUTCH ON THE DOWNSTREAM WALL**

16. Bremsstrahlung shield (BS # 6) in place and banded. (Beam-stop) as in photo 11.

OPCO / Beamline Staff: \_\_\_\_\_ Date: \_\_\_\_\_