

Subject:	NSLS-II Beamline 4-BM Radiation Safety Component Checklist		
Number:	NSLSII-R-XFD-CHK-020	Revision:	1
		Effective:	8/28/2017
			Page: 1 of 3

Check the following on the roof of the FOE

- 4BMA-LBYR-01 Check roof labyrinth is secured closed and labeled.
- 4BMA-LBYR-02 Check roof labyrinth is secured closed and labeled.
- 4BMA-LBYR-03 Check roof labyrinth is secured closed and labeled.
- 4BMA-LBYR-04 Check roof labyrinth is secured closed and labeled.

Check the following items in the First Optical Enclosure (FOE, enclosure 4-BM-A)

- 4BMA-MSK-01 Check mask is in place and labeled.
- #1 4BMA-BRC-01 Check collimator shielding is in place and labeled as per photograph.
- #2 4BMA-SBRS-01 Check Secondary Bremsstrahlung shield is in place and labeled as per photograph.
- 4BMA-MSK-02 Check mask is in place and labeled.
- #3 4BMA-BRC-02 Check collimator shielding is in place and labeled as per photograph.
- 4BMA-LBYR-05 Check wall labyrinth is secured closed and labeled.
- #4 4BMA-GU-01 Check hutch guillotine is secured closed and labeled as per photograph.

Check the following on the XFM Shielded Beam Transport Line (SBT)

- #5 4BM1-CLLR-01 Check collar is labeled with all shields in place as per photograph.
- 4BM1-VA-01 Check shielded beampipe is in place and labeled.
- #6 4BM1-SPE-01 Check enclosure is labeled with all shields and labyrinth (below enclosure) installed as per photograph.
- 4BM1-VA-02 Check shielded beampipe is in place and labeled.
- #7, #8 4BM1-ME-01 Check enclosure is installed and secured with wall labyrinth on outboard side (photo #7), wall panel on inboard side (photo #8), and pump box below.
Note- MSK3 and collimator CO3 are located inside the enclosure.
- 4BM1-VA-03 Check shielded beampipe is in place and labeled.
- #9 4BM1-SPE-02 Check enclosure is labeled with all shields and labyrinth (below enclosure) installed as per photograph.
- 4BM1-VA-04 Check shielded beampipe is in place and labeled.
- #10, #11 4BM1-ME-02 Check enclosure is installed and secured with labyrinth on outboard side (photo #10) and door on inboard side (photo #11). Check door is labeled and secured closed with drilled fasteners and cable.
- 4BM1-VA-05 Check shielded beampipe is in place and labeled.

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		Effective:	8/28/2017
			Page: 2 of 3

- #12 **4BM1-SPE-03** Check enclosure is labeled with all shields and labyrinth (below enclosure) installed as per photograph.
- 4BM1-VA-06** Check shielded beampipe is in place and labeled.
- #13 **4BM1-CLLR-02** Check collar is labeled with all shields in place as per photograph.

Check the following on the roof of the SOE (Enclosure 4-BM-B)

- 4BMB-LBYR-01** Check roof labyrinth is secured closed and labeled.
- 4BMB-LBYR-02** Check roof labyrinth is secured closed and labeled.
- 4BMB-LBYR-03** Check roof labyrinth is secured closed and labeled.
- 4BMB-LBYR-04** Check roof labyrinth is secured closed and labeled.
- 4BMB-DUCT-01** Check air handler duct is in place and labeled.

Check the following on the roof of the End Station (4-BM-C) Enclosure

- 4BMC-LBYR-01** Check roof labyrinth is secured closed and labeled.
- 4BMC-LBYR-02** Check roof labyrinth is secured closed and labeled.
- 4BMC-LBYR-03** Check roof labyrinth is secured closed and labeled.
- 4BMC-LBYR-04** Check roof labyrinth is secured closed and labeled.
- 4BMC-DUCT-01** Check air handler duct is in place and labeled.

Check the following items in the Secondary Optics Enclosure (SOE, 4-BM-B)

- #14 **4BMB-GU-01** Check hutch upstream wall guillotine is secured closed and labeled as per photograph.
- 4BMB-MSK-01** Check mask is in place and labeled.
- #15 **4BMB-BRC-01** Check collimator shielding is in place and labeled as per photograph.
- 4BMB-VVS-01** Check Monochromator Vacuum Vessel is secured in place and labeled.
- 4BMA-MSK-02** Check mask is in place & labeled.
Note- SBRS2 is attached to the downstream side of the mask.
- 4BMB-PSH-01** Check photon shutter is secured in place and labeled.
- #16 **4BMB-GU-02** Check hutch downstream wall guillotine is secured closed and labeled as per photograph.

Check the following items in the End Station (4-BM-C) Enclosure

- #17 **4BMC-GU-01** Check hutch upstream wall guillotine is secured closed and labeled as per photograph.

Subject: **NSLS-II Beamline 4-BM Radiation Safety Component Checklist**Number: **NSLSII-R-XFD-CHK-020** Revision: **1** Effective: **8/28/2017** Page: **3 of 3**#18 **4BMC-STP-01** Check Beam Stop is installed per photograph and labeled.

8/23/2017

8/23/2017

X Ryan TapperoRyan Tappero
4-BM Lead Beamline Scientist
Signed by: Tappero, Ryan**X** Mary Carlucci-Dayton
Technical Authority
Signed by: Carlucci-Dayton, Mary**Inspection Performed By:**

Print Name _____ Signature: _____ Date: _____

*****Removal of any radiation safety components or opening of any locks listed on this checklist requires posting an approved NSLS-II Safety System Work Permit*****