Except for the Mekometer Port (checkpoint 5701), all configurations must match the associated photograph located near the checkpoint.

**Inside Storage Ring Pendant 5**

**Check 5001 through 5022 in Cell 17:**

5001. ☑️ Utility Penetration shielding at 16 ID in place and labeled
5002. ☑️ Vacuum flange and blank off at Cell 17 Girder 2 in place and labeled
5003. ☑️ Dipole chamber mounting brackets at Cell 17 Girder 3 in place and labeled
5004. ☑️ Vacuum Absorber at Cell 17 Girder 3 in place and labeled
5005. ☑️ Dipole Shadow shield at Cell 17 Girder 4 in place, banded and labeled
5006. ☑️ Ratchet Wall Plug (Front end) shielding at 16 BM in place and labeled
5007. ☑️ Utility Penetration shielding at 16 BM in place and labeled
5008. ☑️ Dipole Shadow shield at Cell 17 Girder 6 in place, banded and labeled
5009. ☑️ Front End Fixed Aperture Mask at 17ID in place and labeled
5010. ☑️ Front End Burn Through Device #1 at 17ID in place and labeled
5011. ☑️ Front End Collimator #1 shielding at 17ID in place and labeled
5012. ☑️ Front End Burn Through Device #2 at 17ID in place and labeled
5013. ☑️ Front End Collimator #2 shielding at 17ID in place and labeled
5014. ☑️ Safety Shutter #1 shielding at 17ID in place and labeled
5015. ☑️ Safety Shutter #2 shielding at 17ID in place and labeled
5016. ☑️ Ratchet Wall Collimator shielding at 17ID in place and labeled (This verifies Burn Through Device #3 in ratchet wall is present)
5017. ☑️ Dipole chamber mounting brackets at Cell 17 Girder 4 in place and labeled
5018. ☑️ Vacuum flange and blank off at Cell 17 Girder 4 in place and labeled
5019. ☑️ Exit Absorber at Cell 17 Girder 6 in place and labeled
5020. ☑️ Chamber mounting brackets at Cell 17 Girder 6 in place and labeled
5021. ☑️ Fixed mask 2 at 17BM in place and labeled
5022. ☑️ Lead Collimator #1 at 17BM in place and labeled

**Check 5101 through 5113 in Cell 18:**

5101. ☑️ Utility Penetration shielding at 17 ID in place and labeled
5112. ☑️ Fixed mask 3 at 17BM in place and labeled. This includes beamline mirror stand adjustment
5102. ☑️ Shadow shield at 17BM in place and labeled
5103. ☑️ Fixed mask 4 at 17BM in place and labeled
5103. Fixed mask 5 at 17BM in place and labeled
5104. Lead Collimator #2 at 17BM in place and labeled
5105. Safety Shutter #1 shielding at 17BM in place and labeled
5106. Safety Shutter #2 shielding at 17BM in place and labeled
5107. Ratchet Wall Collimator shielding at 17BM in place and labeled
5108. Dipole Shadow shield at Cell 18 Girder 4 in place, banded and labeled
5109. Utility Penetration shielding at 17 BM in place and labeled
5110. Dipole Shadow shield at Cell 18 Girder 6 in place, banded and labeled
5111. Ratchet Wall Plug (Front end) shielding at 18 ID in place and labeled

**Check 5201 through 5222 in Cell 19:**

5201. Utility Penetration shielding at 18 ID in place and labeled
5202. Reserved for future use
5203. Reserved for future use
5204. Vacuum flange and blank off at Cell 19 Girder 2 in place and labeled
5205. Dipole chamber mounting brackets at Cell 19 Girder 3 in place and labeled
5206. Vacuum Absorber at Cell 19 Girder 3 in place and labeled
5207. Dipole Shadow shield at Cell 19 Girder 4 in place, banded and labeled
5208. Reserved for future use
5209. Reserved for future use
5210. Reserved for future use
5211. Reserved for future use
5212. Ratchet Wall Plug (Front end) shielding at 18 BM in place and labeled
5213. Utility Penetration shielding at 18 BM in place and labeled
5214. Front End Fixed Aperture Mask at 19ID in place and labeled
5215. Front End Burn Through Device #1 at 19ID in place and labeled
5216. Front End Collimator #1 shielding at 19ID in place and labeled
5217. Front End Burn Through Device #2 at 19ID in place and labeled
5218. Front End Collimator #2 shielding at 19ID in place and labeled
5219. Safety Shutter #1 shielding at 19ID in place and labeled
5220. Safety Shutter #2 shielding at 19ID in place and labeled
5221. Dipole Shadow shield at Cell 19 Girder 6 in place, banded and labeled
5222. Ratchet Wall Collimator shielding at 19ID in place and labeled (This verifies Burn Through Device #3 in ratchet wall is present)
Check 5301 through 5306 in Cell 20:
5301. ✔ Utility Penetration shielding at 19 ID in place and labeled
5302. ✔ Dipole Shadow shield at Cell 20 Girder 4 in place, banded and labeled
5303. ✔ Ratchet Wall Plug (Front end) shielding at 19 BM in place and labeled
5304. ✔ Utility Penetration shielding at 19 BM in place and labeled
5305. ✔ Dipole Shadow shield at Cell 20 Girder 6 in place, banded and labeled
5306. ✔ Ratchet Wall Plug (Front end) shielding at 20 ID in place and labeled

Check 5401 through 5416 in Cell 21:
5401. ✔ Utility Penetration shielding at 20 ID in place and labeled
5402. ✔ Vacuum flange and blank off at Cell 21 Girder 2 in place and labeled
5403. ✔ Dipole chamber mounting brackets at Cell 21 Girder 3 in place and labeled
5404. ✔ Vacuum Absorber at Cell 21 Girder 3 in place and labeled
5405. ✔ Dipole Shadow shield at Cell 21 Girder 4 in place, banded and labeled
5406. ✔ Ratchet Wall Plug (Front end) shielding at 20 BM in place and labeled
5407. ✔ Utility Penetration shielding at 20 BM in place and labeled
5408. ✔ Dipole Shadow shield at Cell 21 Girder 6 in place, banded and labeled
5409. ✔ Front End Fixed Aperture Mask at 21 ID in place and labeled
5410. ✔ Front End Burn Through Device #1 at 21 ID in place and labeled
5411. ✔ Front End Collimator #1 shielding at 21 ID in place and labeled
5412. ✔ Reserved for future use.
5413. ✔ Front End Collimator #2 shielding at 21 ID in place and labeled
5414. ✔ Safety Shutter #1 shielding at 21 ID in place and labeled
5415. ✔ Safety Shutter #2 shielding at 21 ID in place and labeled
5416. ✔ Ratchet Wall Collimator shielding at 21 ID in place and labeled (This verifies Burn Through Device #2 in ratchet wall is present)

Check 5501 through 5509 in Cell 22:
5501. ✔ Utility Penetration shielding at 21 ID in place and labeled
5502. ✔ RF utility penetration shielding in place and labeled
5503. ✔ RF waveguide penetration #2 shielding in place and labeled
5504. ✔ RF cable tray penetration shielding in place and labeled
5505. ✔ Dipole Shadow shield at Cell 22 Girder 4 in place, banded and labeled
5506. ✔ Ratchet Wall Plug (Front end) shielding at 21 BM in place and labeled
5507. ✔ Utility Penetration shielding at 21 BM in place and labeled
5508. ✔ Dipole Shadow shield at Cell 22 Girder 6 in place, banded and labeled
NSLS-II Storage Ring Pendant 5 Radiation Safety Component Checklist

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Prepared by: L. Doom Approved by: R. Chmiel

5509. Ratchet Wall Plug (Front end) shielding at 22 ID in place and labeled

Outside Storage Ring Tunnel Pendant 5

Check 5601 through 5630 along the storage ring outer wall

5601. Utility Penetration shielding at 16 ID in place and labeled (inside hutch)
5602. Fixed concrete blocks (2) at 16 BM in place and labeled (inside hutch)
5603. Ratchet Wall Plug (Front end) shielding at 16 BM in place, banded and labeled
5604. Utility Penetration shielding at 16 BM in place and labeled
5605. Ratchet Wall Collimator shielding at 17 ID in place and labeled (This verifies Burn Through Device #3 in ratchet wall is present)
5606. Utility Penetration shielding at 17 ID in place and labeled (inside hutch)
5607. N/A Fixed concrete blocks (2) at 17 BM in place (blocks cannot be accessed)
5608. Ratchet Wall Collimator shielding at 17 BM in place and labeled
5609. Utility Penetration shielding at 17 BM in place and labeled
5610. Ratchet Wall Plug (Front end) shielding at 18 ID in place, banded and labeled
5611. Utility Penetration shielding at 18 ID in place and labeled
5612. Fixed concrete blocks (2) at 18 BM in place and labeled
5613. Ratchet Wall Plug (Front end) shielding at 18 BM in place, banded and labeled
5614. Utility Penetration shielding at 18 BM in place and labeled
5615. Ratchet Wall Collimator shielding at 19 ID in place and labeled (This verifies Burn Through Device #3 in ratchet wall is present)
5616. Utility Penetration shielding at 19 ID in place and labeled
5617. Fixed concrete blocks (4) at 19 BM in place and labeled
5618. Ratchet Wall Plug (Front end) shielding at 19 BM in place, banded and labeled
5619. Utility Penetration shielding at 19 BM in place and labeled
5620. Ratchet Wall Plug (Front end) shielding at 20 ID in place, banded and labeled
5621. Utility Penetration shielding at 20 ID in place and labeled
5622. Fixed concrete blocks (2) at 20 BM in place and labeled
5623. Ratchet Wall Plug (Front end) shielding at 20 BM in place, banded and labeled
5624. Utility Penetration shielding at 20 BM in place and labeled
5625. Ratchet Wall Collimator shielding at 21 ID in place and labeled (This verifies Burn Through Device #2 in ratchet wall is present)
5626. Utility Penetration shielding at 21 ID in place and labeled
5627. Fixed concrete blocks (2) at 21 BM in place and labeled
5628. Ratchet Wall Plug (Front end) shielding at 21 BM in place, banded and labeled
5629. ☑ Utility Penetration shielding at 21 BM in place and labeled
5630. ☑ Ratchet Wall Plug (Front end) shielding at 22 ID in place, banded and labeled (inside hutch)

**Check 5701 on the Storage Ring Mezzanine at Cell 21**

5701. ☑ Mekometer port cover plate labeled and shielding padlocked (below cover plate)

**Check 5801 in Service Building 5:**

5801. ☑ Fixed concrete blocks (8) in place and labeled

**Check 5901 through 5903 in the RF Building:**

5901. ☑ RF utility penetration shielding in place and labeled
5902. ☑ RF waveguide penetration #2 shielding in place and labeled
5903. ☑ RF cable tray penetration shielding in place and labeled

Prepared By: Lewis Doom
Approved By: Robert Chmiel

9/22/2016 9/22/2016

Signed by: Doom, Lewis
Signed by: Chmiel, Robert

Inspected by
Print Name: Lewis Doom Sr Signature: Lewis Doom Jr Date: 9/23/16

*****Removal of any shielding or opening of any locks listed on this checklist requires posting an approved Photon Sciences Safety System Work Permit *****