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Date: 10/23/14

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T. Roser

Date: 10/24/14

CeC PoP Experiment RSC Check-Off List for Low Power Beam Testing of the 112 MHz SRF electron gun

Completion of this CeC PoP Experiment RSC Check-Off List is a prerequisite for beam testing.

Upon completion of this check-off list in the MCR, the 112 MHz SRF electron gun testing may commence.

1. _____ (LP) **RSC LOTO has been applied to prevent 112 MHz cavity from being energized. This or equivalent must remain in place until the check-off list is complete.**
2. _____ (LP) RSC LOTO has been applied to prevent excitation of the 500 MHz buncher cavities.
3. _____ (LP) Physical means allow only dark current from the gun.
4. _____ (LP) C-AD OPM 2.5.2.2 must be followed for the low power test.
5. _____ (LE) RHIC shielding and barriers inspected and acceptable low power beam operations
6. _____ (ACG) ^{RF DB} PASS is certified for IP2 region.
7. _____ (RCD) Area near IP2 is roped off and posted Controlled Area.
8. _____ (OC) Fenced area above IR has been swept and locked.
9. _____ (OC) Fenced area between IR and 1002B swept and locked.
10. _____ (OC) MCR will be manned while there is the potential for beam.
11. _____ (LE) Area near IP2 is posted as no ladders/no climbing.
12. _____ (ACG) ODH interlocks certified.

13. ____ (RSCC) IR shielding has been examined and found acceptable.
14. ____ (LP) IR shielding has been examined and found acceptable.
15. ____ (RSCC) Radiation survey details given to RCD.
16. ____ (RSCC) The CeC configuration is same as reviewed for run14.
17. ____ (OC) The sweep procedure for the IR is acceptable.
18. ____ (ACG) ECNs for gun have been approved.
19. ____ (ACG) Active bypasses for 2 O'clock ACS have been reviewed by RSCC.
20. ____ (RGCD) Gun registered as an RGD.
21. ____ (LP) Acknowledges that RCD will be requested to do surveys.
22. ____ (LP) 112 MHz SRF gun is ready for RF testing.
23. ____ (OC) List completion verified by on-duty operations coordinator.

When the list above is complete then cold emission testing of the CeC PoP Experiment SRF electron gun may begin. In addition, the warm cavities can be unlocked for testing.

When the SRF gun is ready to potentially generate X-rays or beam, the on-duty RCT needs to be in the area to conduct surveys of the shielding and penetration. After the surveys have been reviewed, the configuration of the area posting near the IP2 will be determined.

To allow the cathode to be excited and create beam from the cathode and not just dark current the following must be completed:

- ____ (LE) The truck port has the full shielding.
- ____ (LE) The cable port has the shielding in place.
- ____ (LP) Systems ready to excite the cathode and produce beam.

When these items are complete the physical controls that prevent the cathode from being excited can be removed.

RCD	Radiological Control Division: P. Bergh or designee
LE	Liaison Engineer: D. Phillips or designee
LP	Liaison Physicist: I. Pinayev or designee
MCRGL	MCR Group Leader: P. Ingrassia or designee

RSCC	Radiation Safety Committee Chairperson: D. Beavis or designee
OC	Operations Coordinator
ACG	Access Control Group: J. Reich or designee
RCT	Radiation Control Technician
IG	Instrumentation Group: M. Minty or designee
CEE	Chief Electrical Engineer: J. Sandberg or designee
RGDC	C-AD RGD Custodian: A. Etkin or designee