

Prepared by: S. Belomestnykh

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Reviewed by: Jana Davis

Date: 1/22/13

Approved by: T. Roser

T. Roser

Date: 1/22/13

**ERL RSC Check-Off List for Cold Emission Testing of the ERL SRF
electron gun**

Completion of this ERL RSC Check-Off List is a prerequisite for cold emission testing.

Upon completion of this check-off list in the MCR, the ERL cold emission testing (CET) of the SRF electron gun may commence.

1. _____ (LP) **RSC LOTO has been applied to prevent the 1 MW klystron from being energized. This or equivalent must remain in place until the check-off list is complete.**
2. _____ (IG) Chipmunk operation verified.
3. _____ (RSCC) The shielding has been examined and found acceptable for SRF cavity tests.
4. _____ (LE) ERL block house shielding and barriers inspected and acceptable for CET.
5. _____ (LE) The barriers are in place at both ends of the trench and posted.
6. _____ (LE) The ladder at the power supply house has a locked barrier and is posted.
7. _____ (RCD) Post area between West wall of the ERL and building wall as access prohibited without a RCT.
8. _____ (ACG) Chipmunks required for CET have interlock function checked. (See attached list).
9. _____ (ACG) PASS test is complete for ERL.

10. ____ (LE) Waveguide is in place for 1 MW klystron and is connected to the SRF gun.
11. ____ (RCD) Entrance gates to the ERL block house posted.
12. ____ (RCD) Areas around the entrance gates roped off and posted not to enter without HP for the cavity tests.
13. ____ (RCD) The support building against ERL shielding is posted as no entry without a RCT during the cavity tests.
14. ____ (LE) Area surrounding ERL is posted as no ladders/no climbing.
15. ____ (ACG) All bypasses or temporary jumpers in place have been discussed with RSCC.
16. ____ (ACG) ODH interlocks certified.
17. ____ (RGDC) Gun registered as an RGD.
18. ____ (LP) The items listed above have been completed.
19. ____ (OC) List completion verified by on-duty operations coordinator.

When the list above is complete then cold emission testing of the ERL SRF electron gun may begin.

When the SRF gun is ready to potentially generate X-rays, 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 ERL block house will be determined.

RCD	Radiological Control Division: P. Bergh or designee
LE	Liaison Engineer: D. Phillips or designee
LP	Liaison Physicist: S. Belomestnykh 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

CHIPMUNKS

Name	Location	Interlock [mrem/hr]	Alarm [mrem/hr]
NMO170	North Labyrinth	50	40
NMO171	North Gate	50	40
NMO172	1 MW Waveguide port	50	40
NMO173	50 kW Waveguide area	50	40
NMO174	West cryo pipe exit	50	40
NMO175	South Gate	50	40
NMO176	South Labyrinth	50	40
NMO177	Internal to ERL 1	-	-
NMO177	Internal to ERL 2	-	-