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ERL RSC Check-Off List for Commissioning Gun to Dump (GtD)

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

Upon completion of this check-off list in the MCR, the ERL may begin commissioning beam from the gun to the beam dump following the approved commissioning sequence (OPM 18.5.8).

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. ____ (LP) RSC LOTO has been applied to prevent excitation of five-cell cavity.
3. ____ (LP) Sweep procedure in place for the blockhouse and west area.
4. ____ (IG) Chipmunk operation verified.
5. ____ (IG) Chipmunk alarm and interlock levels checked against table below.
6. ____ (LE) ERL block house shielding and barriers inspected and acceptable low power beam operations
7. ____ (LE) Barriers are in place at both ends of the trench and posted.
8. ____ (LE) The ladder at the power supply house has a locked barrier and is posted.
9. ____ (LE) Access panel on side of electronic room is locked closed.
10. ____ (RCD) Post area between West wall of the ERL and building wall as "HP escort required when ERL is operating. Contact ERL control room at ext 3135 for operating status"

11. ____ (ACG) Chipmunks required for GtD have interlock functions checked. (See attached list).
12. ____ (ACG) PASS test is complete for ERL.
13. ____ (RCD) Entrance gates to Building 912 NEEBA as "Controlled Area, TLD required for entry.
14. ____ (LE) Area surrounding ERL is posted as no ladders/no climbing.
15. ____ (LE) Second dipole after gun is RS LOTOed off.
16. ____ (ACG) All bypasses or temporary jumpers in place have been discussed with RSCC.
17. ____ (ACG) ODH interlocks certified.
18. ____ (RSCC) ERL shielding has been examined and found acceptable.
19. ____ (RCD) Building roof over ERL posted " No access to this area of roof when ERL is operating. Contact ERL control room at ext. 3135 for operating status".
20. ____ (LP) Blockhouse and west fenced areas have been verified as swept.
21. ____ (ACG) The dipole interlock bypass key is in the bypass position.
22. ____ (ACG) NMO172 moved to the new position and interlocks tested.
23. ____ (IG) NMO172 moved to new position and tested.
24. ____ (RSCC) Three dipoles downstream on extraction dipole RS LOTOed off.
25. ____ (LP) ERL ready for Gun to Dump (GtD)
26. ____ (OC) List completion verified by on-duty operations coordinator.

When the list above is complete then the ERL SRF electron gun may begin commissioning with beam as per the commissioning sequence.

The on-duty RCT needs to be in the area to conduct surveys of the shielding and penetrations. After the surveys have been reviewed, the configuration of the area posting near the ERL block house will be determined. A detailed survey will be conducted and documented after stable operation of the gun at 1-10W is achieved to the Faraday cup.

RCD Radiological Control Division: P. Bergh or designee

LE	Liaison Engineer: D. Phillips or designee
LP	Liaison Physicist: D. Kayran 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	20	10
NMO171	North Gate	2.5	1
NMO172	1 MW Waveguide port	2.5	1
NMO173	50 kW Waveguide area	2.5	1
NMO174	West cryo pipe exit	2.5	1
NMO175	South Gate	2.5	1
NMO176	South Labyrinth	50	20
NMO177	Internal to ERL1	-	-
NMO178	Internal to ERL 2	-	-
NMO181	Gun power limit	20	10
NMO182	Power limit gun and dump	20	10

