

Prepared By:
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ERL RSC Check-Off List for Cold Emission Testing of the ERL 5-cell Cavity

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

Upon Completion of this check-off list and the completion of the ASSRC check-off list in the MCR the ERL cold emission testing may commence.

1. ____ (LP) **RSC LOTO has been applied to prevent the 50 kW power supply from being energized. This or the equivalent must remain in place till the check-off list is complete.**
2. ____ (IG) Chipmunk operation verified.
3. ____ (RSCC) The shielding has been examined and found acceptable for the cold emission test.
4. ____ (RSCC) The items missing from the final intended ERL configuration have been reviewed and approved for the cold emission test.
5. ____ (LE) Block house shielding and barriers inspected and acceptable for CET and FPC conditioning operations.
6. ____ (LE) The barriers are in place at both ends of the trench and posted with sign #4.
7. ____ (LE) The ladder at the power supply house has a locked barrier and is posted with sign #4.
8. ____ (RCD) Post area between West wall of the ERL and building wall with sign #2.
9. ____ (ACG) Chipmunks required cold emission testing have interlock function checked. (See attached list).
10. ____ (ACG) Verify fault detection of the 480 contactors will be area alarms and alarms to MCR and CAS.
11. ____ (ACG) PASS tests complete for ERL.

12. ____ (LE) Waveguide is in place for 1MW system through penetration in second story of "condo", barrier on end of waveguide still in place.
13. ____ (RCD) Entrance gates to the ERL block house posted with sign #1.
14. ____ (RCD) Areas around the entrance gates roped off and posted with sign #2.
15. ____ (RCD) Both doors to the laser room posted with sign #2.
16. ____ (RCD) On the second floor condo post the immediate area where the waveguide penetrates the ERL Block House with sign #2.
17. ____ (RCD) On the east side of ERL, the alley way between the ERL Control Room and the ERL support building post area with sign #3.
18. ____ (RCD) The door to the Klystron posted with sign #5.
19. ____ (LE) Area surrounding ERL posted as no ladders/no climbing.
20. ____ (ACG) All bypasses or temporary jumpers in place have been discussed with the RSCC.
21. ____ (LP) The items listed above have been completed.
22. ____ (OC) List completion verified by on-duty operations coordinator.

When the list above is complete then cold emission testing of the ERL 5-cell cavity may begin.

When the cavity is ready to potentially generate x-rays 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 postings near the blockhouse will be determined.

RCD: Radiation Controlled Division: P. Bergh or designate.
 LE: Liaison Engineer: D. Phillips
 LP: Liaison Physicist: Sergey Belomestnykh or designate.
 MCRGL: MCR Group Leader: Peter Ingrassia or designate.
 RSCC: Radiation Safety Committee Chairperson: D. Beavis or designate
 OC: Operations Coordinator
 ACG: Access Control Group: J. Reich or designate.
 RCT: Radiation Control Technician
 IG: Instrumentation Group: R. Atkins or designate.
 CEE: Chief Electrical Engineer: J. Sandberg or designate.
 RGDC: CA RGD custodian: A. Etkin or designate.
 ERLGL: ERL Group Leader

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	-	-
NMO178	Internal for ERL 2	-	-

POSTING SIGNS

Sign #1	<p>HIGH RADIATION AREA When cavity testing is in progress Entry not permitted during cavity test. Contact ERL operator at ext. 3135 or 3121 for cavity testing status.</p>
Sign #2	<p>CONTROLLED AREA TLD Required for Entry HP Escort with appropriate survey meter required for entry when cavity testing is in progress. Contact HP at ext 4660 Contact ERL operator at ext. 3135 or 3121 for cavity testing status.</p>
Sign #3	<p>CONTROLLED AREA TLD Required for Entry</p>
Sign #4	<p>Radiation Barrier Do Not Remove Contact LE or LP for entry</p>
Sign #5	<p>HIGH RADIATION AREA With Klystron operating Entry not permitted with Klystron operating Klystron is considered operating when door is locked and KIRK Key removed</p>