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Date: 1/29/14

2014 RHIC RS Check-off List for RF cavity operation without beam and without shielding in front of the north magnet port

LOTO

The following lock can be removed when RS check-off list is complete:

1. _____ (LP) RF cavity LOTO.
lock# _____ tag# _____ date _____ person _____

ACCESS CONTROL

1. _____ (ACG) 4 o'clock access control systems functional testing completed.
2. _____ (ACG) Any active bypasses in the 4 o'clock system have been reviewed with the RSCC and are allowed to remain.

SHIELDING

3. _____ (LE) 4 o'clock blockhouse shielding is complete. A minimum of one layer of shielding is erected in front of the south facing rollup door. No vertical cracks exceed 3/8 inches (exception can be provided on a case by case basis by the RSCC).

4. _____ (LE,MSGL) North magnet port rollup door is without shielding. Rollup door is locked and tagged.
 lock# _____ tag# _____ date _____ person _____
 lock# _____ tag# _____ date _____ person _____
5. _____ (LE,MSGL) RS LOTO can only be removed from the rollup door when all RF cavities are LOTOed.

BERM AND OTHER EXTERNAL AREAS

6. _____ (CAS) The 4 o'clock fenced area on the outside of the berm is swept and secured.

RADIATION MONITORING AND POSTINGS

Sign-C	Fence Posting: Caution, Controlled Area, TLD required
Sign-H	Radiation Barriers (Patio Blocks): Caution, Facility Boundary, Contact Liaison Engineer Before Removal
Sign-G	Roof Ladder Access: Controlled Area, TLD required. Contact Building Manager for Access

7. _____ (RCD) Shielding blocks in front of 4 o'clock roll-up door (facing south) is posted with Sign-H.
8. _____ (RCD) Fences (inside and outside the berm) posted with sign-C.
9. _____ (RCD) Ladder cover on 4 o'clock support building posted with Sign-G.
10. _____ (RCD) The area outside the north magnet port to the retaining wall is roped off and posted as "Radiation Area" and "No Access without HP".
11. _____ (RCD) The cable ports on the inside of the ring near the south retaining wall are roped off and posted "No Access".
12. _____ (RCD) The north magnet port rollup door is posted as "Radiation Barrier. Do not open".
13. _____ (RCD) Periodic radiation surveys will be performed during RF commissioning without beam.
14. _____ (ACG) NMON250 (RF chipmunk in tunnel) is in alarm and interlocking mode while RHIC is operated without beam. It is in a mode to interlock RF critical devices when zone 4Z2 is accessible and RF enabled.

15. _____ (IG) Verify that chipmunks have been successfully tested and alarm levels are set (see table 1).

TABLE 1. Chipmunks required for RF operation in RHIC without beam.

Name	Location	Trip Level
NMON250	At 4GI1 near rf gate for x-rays (in tunnel), no-beam only	2.5 (Interlock)
NMON251	At gate 4GE3 (1005-S labyrinth)	2.5 (Alarm)
NMON252	At gate 4GE2 (1004-A labyrinth)	2.5 (Alarm)

READINESS FOR BEAM IN RHIC:

16. _____ (LP) RF area (1004) ready for RF operation without beam.
 17. _____ (MSG L) Checklist complete.

When this Check-Off List is complete RHIC RF cavities can be operated without beam.

TABLE 2. KEY

ACG	Access Controls Group: J. Reich or designee
CAS	Collider Accelerator Support
IG	Instrumentation Group: D. Gassner or designee
LE	Liaison Engineer, Charlie Folz, Al Pendzick or designee
LP	Liaison Physicist, A. Drees or designee
MSG L	Maintenance Support Group Leader: P. Sampson
RCD	Radiological Control Division