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Reviewed by: Dana Beaver
Date: 3/9/10
Approved by: Wolfram Fischer
Date: 3/9/2010

NSRL Check-Off List

(NSRL-10A, March 2010)

This check-off list, intended for routine operations at NSRL, is to be completed before the beginning of every run period. It is divided into two sections, the first of which is the LOTO items which must be applied before the second section items may be checked off.

1. Lock-Out Tag-Out Items

All LOTO items in this section are to be completed by the NSRL liaison physicist (or designee) before moving on to section 2. The LOTO may be removed after section 2 items are checked off.

1. _____(LPR): LOTO D6 Magnet Power Supply in "OFF" position (Building 930A)

   Tag Number: _____

   Person: A.Rusek

   Date and time: _____ 2010

2. _____(LPR): LOTO Beam-Plug in Stub-Tunnel in "OFF" position (Building 956)

   Tag Number: _____

   Person: A.Rusek

   Date and time: _____ 2010

OR:

3. _____(LPR): LOTO TTB key in the key box (Building 914)

   Tag Number: _____

   Person: A. Rusek

   Date and time: _____ 2010

4. _____(LPR): LOTO LTB key in the key box (Building 914)

   Tag Number: _____

   Person: A. Rusek

   Date and time: _____ 2010

2. Check-Off Items

Radiation Control Division Items:

*rcd.1*_____(RCD) Stub Tunnel Gate posted:

"High Radiation Area
When Beam On in Booster
Contact MCR @ 4662
For Beam Status"

*rcd.2*_____(RCD) Service tunnel outer entrance-door posted:

"Controlled Area"

*rcd.3*_____(RCD) Service tunnel inner entrance-door posted:

"High Radiation Area
When Beam On
Radio Active Material Area
TLD required"

*rcd.4*_____(RCD) Automatic Doors to Target Room posted:

"High Radiation Area
When Beam On
Radio Active Material Area
TLD required"

*rcd.5*_____(RCD) Gates and Fence defining the Berm enclosure posted:

"Controlled Area"

Access Control Group Items *(J.Reich or Designee)*:

*acg.1*_____(ACG) Interlock functional checks complete.

*acg.2*_____(ACG) The D6 back-leg winding power supply current limited to 100A.

*acg.3*_____(ACG) Access system functional checks complete.

*acg.4*_____(ACG) Chipmunk interlocks tested with chipmunks in place.

*acg.5*_____(ACG) All bypasses or temporary jumpers in the interlocks have been reviewed with the RSC.

Instrumantation Group Items *(R.Atkins or Designee)*:

*ig.1*_____(IG) All NSRL chipmunks operational:

- _____NM130 (on the berm)
- _____NM131 (target room labyrinth)
- _____NM132 (service entrance labyrinth)

*ig.2*_____(IG) Trip levels on chipmunks set to:

- _____NM130 at 2.5 mrem/hour
- _____NM131 at 2.5 mrem/hour
- _____NM132 at 2.5 mrem/hour

NSRL Liaison Physicist Items *(A.Rusek or Designee)*:

*lpn.1*_____(LPN) All NSRL chipmunks in correct locations:

- _____NM130 (on the berm)
- _____NM131 (target room labyrinth)
- _____NM132 (service entrance labyrinth)

*lpn.2*_____(LPN) Shielding blocks in stub tunnel and service entrance in place.

*lpn.3*_____(LPN) 302 Ion Chamber in place.

*lpn.4*_____(LPN) No obstructions in the upstream end of the target rail.

*lpn.5*_____(LPN) Beam cutoff accomplished by RF and extraction bump (no beam dumped on the RD1/RD2 20° bend magnet).

On-Shift Operations Coordinator Items:

*oc.1*_____(OC) NSRL berm fenced area swept and secured.

*oc.2*_____(OC) The stub tunnel chipmunks (NM133, NM134) alarms turned off.

Readiness Signoff Items:

*rs.1*_____(LPN) NSRL ready for operation.

*rs.1*_____(OC) All check-off items signed off.

The LOTO from Section 1 may now be removed.

- ACG – Access Control Group *(J.Reich or Designee)*
- CEE – Chief Electrical Engineer *(J.Sandberg or Designee)*
- CEE – Chief Mechanicalcal Engineer *(J.Tuozzolo or Designee)*
- IG – Instrumentation Group *(R. Atkins or Designee)*
- LPN – NSRL Liaison Physicist *(A.Rusek or Designee)*
- MCRGL – Main Control Room Group Leader *(P.Ingrassia or Designee)*
- OC – On Shift Operations coordinator
- RCD – Radiation Control Devision *(P.Bergh or Designee)*
- RSC – Radiation Safety Committee *(D.Beavis or Designee)*