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Date: 1/10/14
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Date: 1/10/14

AtR RSC Check-Off List for Protons and Heavy Ions to be Transported to the W-Dump only

Purpose

Completion of this AtR RSC Check-Off List is a prerequisite for for transporting proton beam or heavy ions down to the W-dump.

The "NO FEB" Check off List at the MCR must be complete and must remain in effect until the completion of this AtR Check off List. After the completion of this List the LOTO imposed by the "NO FEB" Check off List may be removed to allow proton or heavy ion beam to the W-dump.

1. _____(LP_FEB) The NO FEB Check off List has been completed
_____ _____(Date/Time)
_____ _____(Person)

The V line MUST remain LOTO during the AtR and RHIC operations.

2._____(RSCC) VD3&4 DC cables disconnected and RS LOTOed.
_____(Tag #)
_____(Lock #)

At least one of the following conditions (3.1 or 3.2) must be true to allow beam to the W-dump. Either the RHIC RSC checkoff list is complete, or RHIC is LOTO to prevent beam from injecting.

3.1 _____(LPRHIC) RHIC RSC Check off List complete.

OR

3.2 _____ (LPRHIC) RHIC RSC LOTOed off .

3.3.1 ATR Switch magnet power supply (psswm) or leads LOTO
_____(LPRHIC) _____lock# _____tag# _____date

3.3.2 X-line arc (psxarc90) power supply or leads LOTO
_____(LPRHIC) _____lock# _____tag# _____date

3.3.3 Y-line arc (psyarc90) power supply or leads LOTO
_____(LPRHIC) _____lock# _____tag# _____date

4._____(LEUup) U-line upstream area shielding and barriers inspected and acceptable.

5._____(LEUdown) U-line downstream area shielding and barriers inspected and acceptable.

6._____(LEV) V-Block house shielding and barriers inspected and acceptable for AtR operations.

7._____(LEW) W-line area shielding and barriers inspected and acceptable.

8._____(LEU) Berm fence inspected.

9._____(RCD) Post AtR Berm Fence as follows:
Radiation Area, Controlled area, RWP required, RWP located at the bldg. 911 training office. Contact MCR prior to entry at x-4662.

10._____(RCD) Post AtR berm Access gates as follows:
Radiation Area, Controlled area, RWP required, RWP located at the bldg. 911 training office. Contact MCR prior to entry at x-4662.

11. _____(ACG) Active temporary changes/bypasses/in place for AtR have been reviewed.

12._____ (RSCC) RSC has reviewed the active temporary changes/bypasses in place for AtR.

13a._____(MCRGL) Procedure in place to limit the number of protons or heavy ions lost in the Injection arcs (X,Y) of AtR.

13b._____(MCRGL) Procedure in place to limit the number of protons or heavy ions lost in Upstream AtR (U & W).

14._____ (MCRGL) Procedure in place for testing of AGS B15 current transformer interlock

15._____(IGH) The AGS B15 Current transformer is functional and will allow an upper limit of **$2.5x10^{12}$ protons per AGS cycle.**

16._____(ACG) The B15 current transformer interlocks have been functionally tested.

17._____, _____(IGH and ACG) Chipmunks required for U,W, X and Y lines (per attached tables) functioning, certified and in place. Alarm and interlock levels set also per attached table. IGH will sign for location and computer aspects, and ACG will sign for interlock functionality.

18._____(ACG) PASS tests complete for running beam to the W-line dump.

19._____(ACG) The B15 current transformer interlocks have been functionally tested.

20._____(LPU) Steel blocks in place at end of U-line, across from UGE2 labyrinth.

21._____(OC) Berm fenced area swept and secured.

22._____(LPW) U, V, W, lines ready for polarized proton beam to the W-dump.

23. _____ (OC) List completion verified by on-duty operations coordinator.

When the list above is complete then polarized protons may be extracted from the AGS to the W-line Beam Dump.

RCD:	Radiation Controlled Division (P. Bergh or designee)
RCT:	Radiation Control Technician
LEUdown)	D. Phillips
LEUup:	D. Phillips
LEW:	D. Phillips
LEV:	D. Phillips
LPFEB:	V. Schoefer
LPU:	V. Schoefer
LPW:	V. Schoefer
LPRHIC:	A. Drees
IGH:	Instrumentation Group Head (M. Minty or designee)
MCRGL:	MCR Group Leader: Peter Ingrassia (or designee)
RSC:	Radiation Safety Committee member
RSCC:	Radiation Safety Committee Chairperson: D. Beavis or designee
OC:	Operations Coordinator
ACG:	Access Control Group (J. Reich or designee)

U-LINE CHIPMUNKS			
Name	Location	Interlock (Alarm) Level [mrem/hr]	Comments
NMO210	Above UD5	NA (4)	
NMO213	Outside gate UGE1 (upstream entrance to U-line)	20.0 (4)	
NMO81	Inside UGE2	20.0 (5)	
NMO86	Inside UGE3	50.0 (20.0)	

W-LINE CHIPMUNKS			
Name	Location	Interlock (Alarm) Level mrem/hr	Comments
NMO216	South edge of Thompson Rd. above Y-line.	2.5 (1)	
NMO217	South edge of Thompson Rd. above X-line.	2.5 (1)	
NMO218	Inside weather door at gate WGE2	20.0 (2)	
NMO237	North edge of Thompson Road, Y-line	2.5 (1)	
NMO238	North edge of Thompson Road, X-line	2.5 (1)	