C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.56.i Linac Sweep Checklist

C-A-OPM Procedures in which this Attachment is used.		
4.56		

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials
_____	_____	_____	_____
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Approved: _____ ***Signature on File*** _____ _____
Collider-Accelerator Department Chairman Date

P. Ingrassia

LINAC SWEEP CHECKLIST

(Team Leader)_____(Operator 2)_____

Time:_____Date:_____

Warning:

IF any personnel are encountered during the sweep, **THEN** determine whether their work will be completed in a short time. **IF** the work will take a long time, **THEN** contact the OC to see if the sweep should be aborted. **IF** the work will be completed in a short time, **THEN** write the name(s) of the workers at the end of the checklist and verify that they leave the enclosure **WITH** the sweep team. **IF** the workers crash out of the enclosure **AND** do not exit with the sweep team, **THEN** the sweep shall be re-initiated.

Prerequisites

- Two Operators to perform the sweep
- Keys: AA256A, BNL3, Cat 24, ME-17
- C-A-OPM-ATT 4.56.i "LINAC SWEEP CHECKLIST" (2 pages)
- TLD, Alarming (chirping) Self Reading Dosimeter (SRD)
- TTB beam stops 1 & 2 are closed (see MCR_2-1, G3 and G4)
- Tank 1 beam stops are closed
- No TTB beam stop failure is indicated (see MCR_2-1DE4)
- No LEBT beam stop failure is indicated (see MCR_2-1DE3)

Check

_____1. Check with HP if special precautions are needed for: HEBT/BLIP "Y", BLIP, LTB/HEBT.
_____2. Team Leader switches Linac to Controlled Access (BNL 3 key & simultaneous RED Controlled Access push-button) at Linac Security Panel (bldg. 930).
_____3. Team Leader unlocks Tank 1 Gate using ME-17 key.

Warning :

DO NOT CLOSE SLIDE BOLT ON TANK 1 GATE. IF the slide bolt is closed then a simultaneous release from MCR and the local use of the BNL3 key is required to reopen the bolt/gate.

_____4. Team Leader and Operator 2 proceed downstream and pass through Tank 9 Gate.
_____5. Team Leader closes Plug Door using CLOSE push-button (M14A23A4 box).

Note:

ONE OPERATOR SHALL GUARD THE DOOR UNTIL IT IS CLOSED.

_____6. Team Leader and Operator 2 proceed downstream towards AGS HEBT Gate.
_____7. Team Leader and Operator 2 pass through the Linac HEBT Gate using the push-button
_____8. Team Leader and Operator 2 proceed to N322 Gate.
_____9. IF the AGS was secured before the Linac THEN the N322 Gate and AGS HEBT Gate were secured and the Operator shall observe an area reset light at the N322 gate. In this case do not pass beyond the N322 gate.
_____10. IF an area reset light is observed at the N322 gate, THEN proceed to step 17
_____11. If the area reset light is not observed, THEN Team Leader opens N322 Gate with BNL3 key and Team Leader and Operator 2 proceed downstream to AGS HEBT Gate.
_____12. While Team Leader stands at AGS HEBT Gate, Operator 2 proceeds to downstream end of cave (N357) and sweeps back upstream to meet Team Leader.
_____13. Team Leader closes and resets AGS HEBT Gate using BNL3 key (M14A24A2 box).
_____14. Team Leader verifies that "RESET" indicator lights yellow.
_____15. Team Leader and Operator 2 sweep upstream through N322 Gate.
_____16. Team Leader resets (BNL3 key) N322 Gate (5032 ACS box)
_____17. Team Leader resets the "area" using push-button at Area Reset Box (below 5032 ACS box). This “STARTS” the sweep for the HEBT to TANK 1 part of the sweep.

CONTINUED ON REVERSE SIDE

Note:
IF steps 10 through 14 are not completed in the ONE allotted minute THEN N322 will not reset and steps 8 through 14 must be repeated.

_____18. Team Leader verifies that Amber reset light is lit (ACS 5032 box).
_____19. Team Leader and Operator 2 sweep upstream to the TTB -- HEBT junction.
_____20. Team Leader stands static watch while Operator 2 proceeds to the downstream end of the TTB spur.
_____21. Operator 2 sweeps upstream and rejoins the Team Leader.
_____22. Team Leader and Operator 2 sweep upstream and sweep through the NEW Linac HEBT Gate.
_____23. Team Leader resets Linac HEBT Gate (ME-17 key) (ACS 5114 box).
_____24. Team Leader verifies "RESET" indicator is lit amber.
_____25. Team Leader and Operator 2 sweep upstream to the junction HEBT-LTB junction.
_____26. Team Leader stands static watch at the upstream end of LTB.DH3 while Operator 2 proceeds to downstream end of LTB alcove.
_____27. Operator 2 sweeps upstream and rejoins Team Leader at DH3.
_____28 Sweep Team sweeps upstream through OLD Linac HEBT Gate
_____29. Team Leader resets Linac Plug Door with BNL 3 key and simultaneous RED "reset" push-button (M14A23A2 box)
_____30. Team Leader verifies that "RESET" indicator is lit yellow.
_____31. Team Leader verifies that two Plug Door Personnel (hinged) Gates are closed.
_____32. Team Leader and Operator 2 proceed to BLIP/HEBT "Y"
_____33. Operator 2 stands static watch at BLIP "Y" (NQ29/PP27) while Team Leader proceeds to BLIP Gate. If BLIP Gate is reset, then go to step 40.
_____34. Team Leader unlocks BLIP GATE JUNCTION BOX (Cat 24 key), opens the box (ACS 5115) and sets the toggle switch to the down/by-pass position.
_____35. Team Leader presses OPEN button (ACS 5116 box) and opens BLIP Gate.
_____36. While BLIP Gate is open, Team Leader sets toggle switch to middle LOCK OUT position, closes the door to the BLIP GATE JUNCTION BOX (ACS 5115), and locks the HP padlock.

Warning:
IF contamination is present (see posting) THEN only Contamination trained operators may enter BLIP. DO NOT ENTER BLIP without HP consent

_____37. Team Leader passes through the BLIP Gate and proceeds to the downstream end of the enclosure.
_____38. Team Leader sweeps upstream through the BLIP/REF enclosure and out the BLIP Gate.
_____39. Team Leader resets the BLIP Gate (ME-17 Key) and verifies that the amber reset light is lit (ACS 5116 box).
_____40. Team Leader sweeps upstream and re-joins Operator 2 at the BLIP "Y"
_____41. Team Leader and Operator 2 (one operator on each side of the beam line) sweep upstream through the Tank 9 Gate (use OPEN button on RF reset panel and the ME-17 key to unlock the gate).
_____42. Team Leader closes and resets Tank 9 Gate (ME-17 key).
_____43. Team Leader verifies the "Reset for Beam" indicator is lit (red)
_____44. Team Leader and Operator 2 sweep upstream towards the Tank 1 Gate.
_____45. Operator 2 shall pass under the tanks and view upstream and downstream:
- _____at Tank 9
- _____at Tank 7
- _____between tanks 6 & 5 including through wall conduit
- _____between tanks 4 & 3 including through wall conduit
- _____between tanks 2 & 1.

_____46. Team Leader and Operator 2 sweep though Tank 1 Gate.
_____47. Team Leader locks and resets (BNL3 key) Tank 1 Gate (M14A22A3 box).
_____48. Team Leader verifies that "Reset" indicator is lit (yellow)
_____49. Team Leader (at Linac Security Panel) resets the Linac by simultaneously turning the BNL3 key and pressing the BLACK "reset" push-button.
_____50. Team Leader inserts but does not capture BNL3 key in RESET/ENABLE Capture Key Panel in MCR or gives key to the O.C.

Note:
Upon reset of the Linac security system a Klaxon shall sound. After a short time, the Linac Tunnel Secured indications will light on the security panel, and the tunnel lights will go out.

_____51. File the checklists in the Completed Sweep Checklist Binder.