Minutes of Meeting: Radiation Safety Committee

Date: Thursday 28 May 1998


Subject(s): 1) E850 in the C1 Beamline (re-visited) - A. Carroll

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Although E850 has been reviewed by the RSC previously, this meeting was necessary for two reasons. First, due to problems with experimental apparatus, E850 has not run in a few years and the committee should be reminded of the experiment operating details and restrictions. Previously, E850 has run with a ~ 12 GeV/c positive secondary beam. And secondly, the upstream C3/C1/C5 area has undergone extensive modification since the last proton operation. Beamline elements have been removed and new elements added to this area. Some of the revisions include a new collimator located after the C Primary Target (and initial LESBIII elements) and two Lamberto quadrupole elements located immediately after the new collimator. Descriptions of both issues were presented to the RSC by A. Carroll.

The RSC approved the operation of E850 with a positive secondary momentum limit of less than 13 GeV/c with the following items included (and completed) in the E850 RSC Check-Off List.

1. C1 beamline set for positive secondary beam, (CK-C1-E850-01)
2. The C1 momentum will be limited to ≤ 13 GeV/c by a primary and redundant I(max) on C1D5, (CK-C1-E850-02).
3. The C1 momentum will be limited to ≤ 13 GeV/c by a primary and redundant I(max) on C1D6, (CK-C1-E850-03).
4. The EVA platform will be fenced to control access to the area, (CK-C1-E850-04).
5. The EVA platform fence will have a locked gate, (CK-C1-E850-05).
6. Dual NMC units will be set to limit the secondary beam intensity to \( \leq 5 \times 10^7 \) particles per AGS cycle (\( \sim 4.5 \) seconds), (CK-C1-E850-06).

[Note: The individual outputs of the NMC units (Limit interlock and Failsafe interlock) each drive separate relays; \( \Rightarrow \) four relays for the two units).

7. The two NMC unit “paddles” have been inspected to ensure they are sufficient to cover the beam aperture, (CK-C1-E850-07).

8. Access to the upstream C1P5 platform is controlled by a locked gate, (CK-C1-E850-08).

9. Verify the C1P5 platform chipmunk is properly located and in interlocking mode, (CK-C1-E850-09).

10. Verify the C1P5 platform chipmunk interlocks when the C1 beam is not properly aligned through C1P4 and/or C1P5, (CK-C1-E850-10).

11. Locate the EVA platform chipmunk such that it allows C1 to operate with a nominal beam tune and limits the prompt radiation on and around the EVA platform to ALARA, (CK-C1-E850-11).

12. A sweep procedure for the C1P5 platform must be completed, (CK-C1-E850-12).

13. A sweep procedure for the EVA platform must be completed, (CK-C1-E850-13).

14. An access procedure for the C1P5 platform must be completed, (CK-C1-E850-14).

15. An access procedure for the C1P5 platform must be completed, (CK-C1-E850-15).

16. Normally accessible areas on and around the EVA platform must be posted by HP to limit occupancy, (CK-C1-E850-16).

17. A walk-through of the C1 areas by Reece, Beavis is required prior to beginning C1 operation, (CK-C1-E850-17).

18. Minimize the prompt radiation levels on and around the EVA platform by appropriate placement and interlock level of the EVA platform chipmunk, (CK-C1-E850-18).

19. Secondary beam intensity will be controlled by two C1 beamline collimators; one adjacent to C3P1 (H only for momentum selection) and one immediately before C1D5 (both H and V), (CK-C1-E850-19).

20. I(min) current limits (primary and redundant) for the F10 Ejector set to require the AGS extracted beam momentum to be greater than 22.5 GeV/c, (CK-C1-E850-20).