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**Minutes of Meeting: Radiation Safety Committee**

**Date:** Thursday 28 May 1998

**Present:** L. Ahrens, D. Beavis, A. Etkin, E. Lessard, W. MacKay, S. Musolino, K. Reece, J. Sandberg, A. Stevens, M. Zarcone; G. Bunce, A. Carroll.

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**Subject(s):** 1) E850 in the C1 Beamline (re-visited) - A. Carroll  
2) B2 Test Beam Intensity Limitation - A. Carroll.

**1) E850 in the C1 Beamline (re-visited) - A. Carroll.**

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 Lambertson quadrupole elements located immediately after the new collimator. Descriptions<sup>1</sup> 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  $\leq 13$  GeV/c by a primary and redundant I(max) on C1D5, **(CK-C1-E850-02)**.
3. The C1 momentum will be limited to  $\leq 13$  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)**.