Wednesday 14 December 1994
K. Reece
KR.

Minutes of meeting: Radiation Safety Committee

Date: Wednesday 14 December 1994

Present: L.Ahrens, D.Beavis, I.H.Chiang, R.Connolly, J.W.Glenn, D.Lazarus, E.Lessard, A.McGeary, S.Musolino, E.Njoku, K.Reece, J.Spinner, A.Stevens, D.Trbojevic, A.Carroll.

Subject(s): C1 operation at 20GeV/c (+) - A. Carroll.

The RSC minutes of 20 March 1994 were distributed to the committee summarizing the previous proposal and recommendations for 20 GeV/c positive operation in the C1 line with the AGS momentum at 24.5 GeV/c. Several of these concerns were addressed by A.Carroll and H.Brown (distributed to RSC with meeting notice) and were reviewed in this meeting.

The C1 momentum acceptance would be constrained by active and passive devices.

1. C1D5 and C1D6 power supplies will each have current limits set to 1% above the operating setpoints for 20 GeV/c, [CK-C1(E850)].
2. C1C1 collimator will be set to 1 inch aperture and the power leads removed and LOTO, [CK-C1(E850)].
3. C1C2 collimator will be set to 0.5 inch aperture and the power leads removed and LOTO, [CK-C1(E850)].
4. C1C3 collimator will be located on top of the C5D7 dipole with a fixed aperture of 1 inch, [CK-C1(E850)].
5. AGS F10 ejector power supply will have redundant minimum current limits corresponding to 95-97% of setpoint for 24.5 GeV/c, [CK-C1(E850)].
6. (addition by chair) C1D3 and C1D4 power supplies will each have current limits set to 1-5% above the operating setpoints for 20 GeV/c, [CK-C1(E850)].

From the above requirements, there should be a separation of the primary proton beam from the C1 beamline momentum acceptance of at least 1.75 GeV/c.

There was some concern regrading the possible fault levels in the B5 area (fairly thin shield at small angle) with beam lost in the vicinity of the C1C3 collimator. Even though the C3 beam dump loss has a similar geometry, this should be studied during start-up for C1 beamline [CK-C1(E850)]. The fault studies listed in the review must be completed and reviewed prior to routine operation of the C1 beamline at 20 GeV/c, [CK-C1(E850)]. Results from fault study #2 is of particular interest (lower momentum analog of 20 GeV/c C1 with 24.5 GeV/c AGS). During these fault studies and routine operation, the trenches in the area should be surveyed. Also, the affect of CP3 should be investigated during these fault studies.

An estimate of possible fault levels in the adjacent areas must be done before turning on the C1 beamline, [CK-C1(E850)]. Additionally, the first two collimators (C1C1 and C1C2) should be reviewed to determine if they are sufficient to attenuate the beam intensity by several orders of magnitude and NOT degrade the beam momentum only slightly such that the effective intensity at 20 GeV/c may be much higher than initially predicted, [CK-C1(E850)].

cc: RSC file