

Wednesday 31 August 1994

K. Reece

*RICL*

Minutes of meeting: Radiation Safety Committee, Thursday 25 August 1994

Present: D.Beavis, H.Brown, I-H-Chiang, R.Connolly, J.Durnan, R.Frankel, J.W.Glenn, D.Lazarus, E.Lessard, W.MacKay, S.Musolino, E.Njoku, D.Phillips, K.Reece, J.Spinner, A.Stevens, K.Woodle, P.Yamin.

Subject(s): 1. RHIC Fault Study plans/locations for transfer line - MacKay.  
2. RHIC Chipmunk locations for transfer line - MacKay.  
3. RHIC transfer line sweep procedures - MacKay.

Item #2:

The discussion followed the beamline shielding and penetrations and resulted in several action items and check-off list items. Also, locations (attached) of a few chipmunks may need to be re-defined as a result of initial studies (eg: place one @ the entrance of an arc (X or Y) and another @ the end of that same arc to measure attenuation). The use of these chipmunks must be determined prior to commissioning. A suggestion was to employ most as area monitors (possibly reading into local scalers only) but with a small number installed in the Security system as interlocking (such as the two over Thomson Road).

The question of the number of chipmunks to be purchased was considered and the committee recommendation was that 24 should be sufficient (13 for RHIC transfer line commissioning and 11 for the g-2 areas). These may be "upgraded" units (ref: RSC sub-committee meeting minutes of 23 August 1994).

Close-out of this item (chipmunk placement) was left open until Friday 2 September to allow RSC members to provide comments to the Chair for consideration.

RSC Check-off list Items.

1. RHIC commissioning mode is nominally  $10^8$  Au operation (NOT protons). A.Stevens' review of the area shielding was for  $10^8$  Au per 30 seconds. The liaison physicist and RSC must define an intensity limit per unit time for the commissioning, (W.MacKay, L.Ahrens, K.Reece)

2. the transfer line berm will be fenced to the road and controlled as a Class IV area (locked but not interlocked). [Fencing of the upstream area common to RHIC and g-2 operation will be reviewed and agreed upon, (S.Musolino, E.Lessard).]

RSC Action Items:

1. shielding for the downstream U-line near the old "horn" must be defined and reviewed prior to allowing beam into the FEB area, (A.Carroll, D.Phillips).

2. controlling access to the area downstream of the old "horn" (old FEB gate #5) must be defined and reviewed prior to allowing beam into the FEB area, (A.Carroll, R.Frankel).

Item #1:

Although the actual Fault Study plans will be written at a later time, a presentation of the fault studies considered was given to the committee for consideration and comment. Some of the questions echoed concerns from the 13 June 1994 meeting (Action Item list of that meeting attached).

At present, there is shielding in the AGS ring @ the FEB port. When the installation schedule requires this to be moved, the RSC must be notified so that the classification and control of the upstream FEB tunnel can be reviewed. At that time, an "FEB Safely Off" beamswitch should be considered and confirming fault studies conducted.

The composition of the RHIC collimator material (heavy-met) was briefly discussed. It was noted that the AGS chief mechanical engineer (J.Cullen) has asked that an analysis be done (W.Leonhardt) of the integrity of this material under the assumed operating modes. A preliminary analysis has been done by A.Stevens for RHIC intensities (RSC files).

Instrumentation for the fault studies will include the loss monitor system, several of these units will be moveable and can be placed as needed for individual studies. W.MacKay will track the state and availability of all instrumentation to be used in these early periods of beam tests.

Fault studies in the "old horn" area should include more detail of possible loss points and survey locations when written.

A last note was to have a small group of the RSC walk the FEB tunnel once again to examine penetrations. [This was done on Tuesday 30 August; W.MacKay, D.Phillips, K.Reece, T.Robinson].

Close-out of this item (fault studies) was left open until Friday 2 September to allow RSC members to provide comments to the Chair for consideration.

RSC Check-off list items:

1. The routing of water pipes from the transfer line defined for HP measurements during commissioning, (D.Phillips, T.Robinson).

RSC Action Items:

1. The AGS in-ring shielding at the FEB port must be tagged and NOT removed without prior RSC notification, (D.Phillips).

Item #3:

Due to time, the presentation on sweep procedures (file) was omitted. These were developed by W.MacKay with the assistance of P.Ingrassia and written in checklist format. One question expressed was the need to have 6 separate areas (concern for the Access Controls Group). Although all members of the RSC can comment on these procedures, the Chair offered that a few RSC members be asked to "formally" review this collection and suggestions/revisions be given to Waldo. Those who have been volunteered for the formal review are H.Brown, S.Musolino, E.Njoku and G.Bunce, and they will work with Waldo to refine these procedures by the first of the calendar year.

Action Items (RHIC transfer line): 6/13/94 RSC mts.

1. LE verify the transfer line sidewall and berm shielding thicknesses and sign-off shielding map, (D.Phillips). <sup>T. Robinson</sup>
2. LE verify the transfer line penetrations geometries and sign-off shielding map, (D.Phillips).
3. Transfer line fence must be extended to Thompson Road, (D.Phillips). <sup>T. Robinson</sup>
4. Additional soil must be added to "X" arc, (D.Phillips). <sup>T. Robinson</sup>
5. Additional soil must be added over the "arc switch" beam dump, (D.Phillips). <sup>T. Robinson</sup>
6. For RHIC heavy ion commissioning, a means of prohibiting protons from the AGS must be decided and implemented, (K.Reece).
7. What is the maximum estimate of AGS Au intensity for FY95 ?, (L.Ahrens, K.Reece).
8. Complete radiation estimates for upstream (orphan) U-line shielding and penetrations, (A.Stevens, E.Lessard).
9. g-2 construction schedule, (G.Bunce).
10. Transfer line fault studies must be defined, (W.MacKay, K.Reece).