

Tuesday 16 May 1995

K. Reece

KRR.

Minutes of meeting: Radiation Safety Committee (sub-committee).

Present: E. Lessard, A. McNerney, A. Pendzick, P. Pile, C. Schaefer, K. Reece.

Subject(s): Shielding modifications in AGS and SEB.

Several locations in the AGS ring and SEB Switchyard have been identified as areas that should be reviewed for shielding improvements (memo Reece to Pendzick 4/6/95, RSC file). This RSC sub-committee addressed these locations as to options and schedule.

1. AGS Ring:

1. South Plug Door: an ILR to pour the correct shape blocks is out. This permanent shielding will be identical to the temporary shielding presently in the labyrinth, [Pendzick, Tuozzolo].

2. North Plug Door: two options here; [Pendzick, Tuozzolo, Reece].

1. Build the same type of shielding configuration in the labyrinth as in the South Plug Door case.

2. Build a shield wall in the AGS ring in front of this labyrinth using 52" steel blocks. Access to the aisle in the ring may be a problem, but since the FEB transport line crosses the AGS ring aisle immediately downstream of this location, it may be possible.

3. The I13-15 "in-ring" blocks will remain in place.

4. Target Building North Catwalk:

1. The original review (McGahern 1991) was ~ \$80k and ~ 166 man-days rigging. Bill should review this location again in search of a more simple (even if less comprehensive) solution, [McGahern].

2. Another option is to move the chipmunk (or increase the interlock and alarm limits) and fence/lock around this location. The actual building roof (~ 30' above the shield top) must remain less than 100mrem in an hour, [McGahern, Reece].

5. Northwest Corner Target Building: There are several items of equipment in the "enclosed" area between the AGS ring and the inside target building. The location of these items may be reviewed later to determine if they can be moved. This area is also where the FEB extraction system is located and should be carefully considered for high intensity FEB operation. Options here include;

1. Place steel inside the AGS ring at the entrance to this labyrinth. This is difficult

due to cable trays, [Penzick].

2. Stack shielding inside the target building at the exit of this labyrinth, [Penzick, Lessard].

6. The "in-ring" shielding at the SEB extraction region will remain in place.

7. Siemens trench: Blocks can be placed in this trench (from the outside) but the trench must first be "cleared" , [Tuozzolo, Penzick].

Additional AGS ring items:

8. The "seam" between the AGS ring and the "D corral" should be reviewed for additional shielding, [Penzick, Lessard].

9. An estimate of the prompt radiation due to a full intensity AGS ring fault should be done for the power supply platform outside the "D" primary gate, [Lessard].

2. SEB ares:

1. Health Physics measurements (attached) indicate the prompt radiation from these trenches is within compliance for the area classifications. However, the first five trenches should be addressed. Specifically, trench #2 may be treated as trench #1 was last summer; pull the middle blocks from the sidewall shielding and place a block in the trench.

Additionally, a sufficient number of lead or steel shot bags should be obtained so these first five trenches can be packed (from the inside) late in the summer maintenance period (ALARA), [Penzick, Reece].

2. C3 target gate: This labyrinth is scheduled to be re-designed and re-built during the summer maintenance period, [Scaduto, Lessard].

3. SEB switchyard trenches reviewed in #2.1 above.

4. "D" gate trench: A block has been designed for this trench and will be put in place this summer, [Pearson].

5. "A2" beam dump: Additional shielding is currently in place but should be reviewed for improvement, [Phillips, Lazarus].

6. "A3" beam dump: One HP measurement suggested a possible concern outside this location. The measurement record should be reviewed, [McGahern, Lazarus, HP].

7. "B5" neutral beam dump: Present documentation suggests this dump may be a significant contribution to "skyshine" in the 912 experimental building. A roof over this location would therefore substantially reduce the ambient levels in the vicinity. This is a long span however and may not be feasible, [Scaduto, H. Brown].

Additional SEB items:

8. As part of the heat exchanger addition to the C/C3 beamline, a shield wall will be built adjacent to the water manifolds outside the C3 beamline, [Scaduto, Penzick].

cc: RSC RSC file W. vanAsselt