

Minutes of Meeting: Radiation Safety Committee

Date: Wednesday 1 April 1998

Present: D. Beavis, E. Lessard, S. Musolino, K. Reece, A. Stevens; R. Marascia.

Subject(s): RHIC 4 o'clock shielding and fencing.

An RSC sub-committee met to review the shielding and fencing design (by A. Stevens) for the RHIC 4 o'clock Interaction Region (IR). The items listed below must be addressed and closed-out on the RSC Check-Off List for RHIC Turn-On.

The RSC approved the shielding and fencing design as presented.

1. The corridor adjacent to the RF Service Building must be posted, "*Radiation Area, Film Badge/TLD Required for Entry*", **(CK-RHIC-01)**. 162
2. All gates for these fenced areas must be locked with a "RHIC Controlled Key". That is, a key that is procedurally supervised by RHIC such that only trained/authorized personnel can be issued a key, **(CK-RHIC-02)**. 163
3. All fenced areas must be posted, "*No Access With Beam ON!*", **(CK-RHIC-03)**. 164
4. Entry into any fenced area with beam on must be procedurally controlled by RHIC with the issuance of a Radiation Work Permit (RWP). An RWP must be issued for each entry, stressing that personnel must limit or exclude occupancy at the RHIC shield wall, **(CK-RHIC-04)**. 165
5. The postings and gate locks may be removed from these fenced areas during "no-beam periods". However, this must be done following formal procedures (brief periods) or with the use of formal Check-Off Lists (after extended downtimes), **(CK-RHIC-05)**. 166
6. The upstream (toward 3 o'clock) and downstream (toward 5 o'clock) fences, running normal to the beam direction (over the berm), must be moved upstream and downstream respectively by 60', **(CK-RHIC-06)**. 167
On the downstream side, the fence will then "capture" the large exhaust vent, but the upstream fence will not extend to the vent on that side. This exhaust vent must be fenced separately, **(CK-RHIC-07)**. 168

7. It was noted in the discussion that present ORPS reporting criteria require an Off-Normal Occurrence to be filed if an unplanned exposure occurs where an untrained worker, or member of the public, could have been exposed to a dose of > 50 mrem.

Discussion of item#7: One proposed way to deal with this ORPS reporting criteria would be to require some form of *continuous* monitoring of personnel at all locations of the RHIC facility where a single pulse fault could result in a dose of 50 mrem (or greater). Another option would be to impose access restrictions, such as fencing, to control access to those areas where doses of 50 mrem (or greater) are possible.

This question was posed to two knowledgeable staff members at FNAL (L. Coulson, D. Cossairt) and their responses are attached. At FNAL, they employ a combination of posting and fencing to effect their access restriction such that their facility faults are less than the ORPS criteria in uncontrolled areas.

An equivalent policy should be drafted by the RSC and recommended to management to address this issue.

cc: RSC (w/attachments#2, 4).
RSC file (w/attachments#1 - 5).

Copy to: D. Lowenstein
S. Ozaki