A. J. S. afs

Minutes of meeting: Radiation Safety Committee, sub-committee

Date: Tuesday, February 22, 2000

Present: A. Etkin, A. Franz, W. Mackay, C. Pearson, C. Schaefer, A. Stevens

Subj: Review of Open Items in RHIC Shielding Database

The RHIC Project maintained a list of items related to shielding and posting issues. Some of these items have not been closed. The subcommittee discussed all the open items, which are attached to these minutes. The items, referred to here by their database ID number, were the following:

ID 41

This item refers to the worst case vents, which exceeded the RHIC design criteria. A fault study is planned here. The best estimate of dose 1 ft. away is about 117 mrem for the DBA fault. Since the vents will be in a controlled area, where exposure to more than 100 mrem in a year is "unlikely", the subcommittee recommends that this item be closed when the berm is posted as a controlled area.

ID 63

This item refers to as-built shielding drawings. Stevens reported that the last signature, D. Lowenstein's, is expected any day. This item can then be closed.

ID 69

Survey shaft barriers. These items will also (see ID 41 above) be within the controlled area, but the potential fault exposure is higher. The barriers are sufficient, but the posting should be changed to "Radiation Barrier, Contact Liaison Engineer Before Entry"

ID 57 and ID 56

These relate to berm erosion in Sextants 1 and 3. This is scheduled to be repaired sometime before this fall (start of year 2 running). The liaison engineer (C. Pearson) should be informed of this necessary repair.

ID 66 and ID 67

These refer to the BRAHMS front shield wall assembly. Stevens reported that he has inspected the current assembly, and that the combination of shims and new assembly procedure has reduced all cracks below the criteria. These items can be closed.

ID 30 and ID 61

These refer to the berm over the injection regions. Stevens reported that C. Pearson is monitoring the progress of new chain link fence that will be erected over these regions prior to the start of running. (A snow fence of lesser extent was present in the first commissioning run.)

ID 61

This item refers to a question of the adequacy of the fence around the berm at 6 o'clock. Stevens reported that the initial issue was an error on his part. The fence is adequate as has been documented in AD/RHIC/RD-126. This item should be closed.

ID 68

This item refers to the STAR shield wall, which was not constructed as designed in the initial commissioning run. Stevens reported that a single custom shield block has been manufactured. The wall should be assembled as designed for the coming run. This item can be closed when the wall is inspected.

IDs 70, 71, 72, 73

These items refer to "stabilization" of patio clock barriers around the cryogenic pipes at 6 o'clock, 8 o'clock, 10 o'clock, and 12 o'clock. Stevens reported that some stabilization has been made at the 8, 10 and 12 o'clock regions, but not at 6 o'clock, which is less high than the others. The sub-committee asked that Lori Stiegler examine the current configuration.

ID 8

This item refers to polyethylene on an internal door within the PHENIX emergency exit labyrinth. Stevens reported that the polyethylene exists but that a sign is needed on the door telling people where to push to open the door. This item should be closed when a sign exists.

ID 14

This item is the packing of local shield around penetrations in the base block of the PHENIX shield wall "as practicable." Action on this item should await fault studies in this area, one of which will be aimed at seeing whether dose through these penetrations can be detected.

ID 22

This item calls for "a procedure" to insure that the region on the South side of the PHENIX assembly area, closer to the ring than a newly constructed gas mixing building, is low occupancy. A. Franz and C. Pearson both stated that no one from PHENIX has any reason to be in the region of concern. After considerable discussion, the following decisions were made. The (relatively wide) region South of the ring-side end of the gas mixing house should be cordoned off with stanchions and rope. Two signs should exist here, one reading "Controlled Area, TLD Required," and the other reading "Do Not Linger." The (relatively narrow) region on the North side of the gas mixing house (between the house and the assembly building) should be similarly posted and, if practicable, a snow fence erected here rather than the stanchion/rope combination.

ID 40

This item is similar to ID 8 above – a polyethylene covered door in the labyrinth leading in this case from the support building on the North side of 8 o'clock into the tunnel. Stevens reported that such a door exists, but that it also needs signs. Again, this item should be closed when signs exist.

ID 64

This item relates to a key box for fence which acts as a radiation barrier exist on the South side of PHENIX. One of the gates on the fence is about 7 ft. outside the PASS gate 7GE1, and was supposed to have a local key box for emergency egress. This key box still does not exist, but Stevens reported that Paul Sparrow has stated that it will exist prior to the run. The sub-committee, because of a concern that the key might "disappear" from the key box, wishes the lock on this gate to be different than the RHIC HP lock, which controls other fences on the site. No specifications are required on the lock (it can be obtained from a local hardware store if required). Keys should be possessed by MCR and HP.

ID 65

This item relates to two penetrations within the 8 o'clock fence enclosure whose purpose is unknown. A block cover had been specified. Stevens reported that the cover exists, so this item can be closed.

ID 74

This item refers to the fact that the boundary of the fence in the ring-center outside direction of the RHIC beam dumps was not built to specifications. This may not be an issue at all, given that the region of the dumps are soon to be within a controlled area, but how much the boundaries are out of specifications is not well known. C. Pearson agreed to have department surveyors check the current boundary. Closing this item is deferred for the present time.

Attachment

Distribution:

D. Beavis (w Attachment)
A. Etkin (w Attachment)
A. Franz (w/o Attachment)
W. Mackay (w Attachment)
C. Pearson (w/o Attachment)
A. Stevens (w Attachment)

cc: RSC file (w Attachment)
RSC (w/o Attachment)