

Thursday 15 February 1996

K. Reece



Minutes of Meeting: Radiation Safety sub-committee.

Date: Thursday 15 February 1996

Present: R. Frankel, K. Reece, P. Sparrow, A. Stevens.

Subject(s): RHIC gates for sextant test.

This meeting was held to define the "general" requirements for the RHIC tunnel access gates associated with the sextant test. This beam test is scheduled for the fall of 1996 and will inject low intensity proton beam through the ATR Y-line into the RHIC tunnel and end at a temporary beamstop to be built at the 4 o'clock hall. Therefore, access controls are necessary from the 6 o'clock to 4 o'clock locations.

1. 6 o'clock:

1. An estimate of the prompt radiation at the 6 o'clock access gate from a beam loss at the RHIC Y-line injection region ($\sim 180^\circ$) must be done (CK-ATR/SEXTANT-01). This may include comparison to previous ATR fault studies and calculations from expected intensity and geometry.
2. Measurements (fault studies) of the prompt radiation at the 6 o'clock access gate due to an injection region loss must be done, (CK-ATR/SEXTANT-02).
3. The 6 o'clock gate will be full aperture.
4. The 6 o'clock gate will be fully operational through the PASS system with a standard gate configuration (i.e. dual door switches, electric strike interlock, gate reset/check station, etc.).
5. An interlocking chipmunk will be placed at the 6 o'clock gate.
6. The 6 o'clock hall will not initially have other access restrictions unless indicated by radiation measurements and/or calculations, (items # 1.1 & 1.2).

2. 4 o'clock:

1. The 4 o'clock hall shielding will NOT be in place.
2. A shield wall and roof will be constructed in the 4 o'clock hall where the RHIC tunnel and 4 o'clock hall meet. This shield will provide a contiguous full enclosure of the proposed beam dump.
3. The beam dump design will be presented to the full RSC for review by A. Stevens.

4. A fence will be constructed around the 4 o'clock hall, restricting nearby access to the shielding surrounding the beam dump.
5. The 4 o'clock gate will be full aperture.
6. The 4 o'clock gate will be fully operational through the PASS system with a standard gate configuration (i.e. dual door switches, electric strike interlock, gate reset/check station, etc.).
7. An interlocking chipmunk will be placed outside the beam dump shielding.
8. The 4 o'clock hall will not initially have other access restrictions unless indicated by radiation measurements and/or calculations.

3. Gate comments:

1. All RHIC tunnel labyrinth access gates will be fully operational through the PASS system with a standard gate configuration (i.e. dual door switches, electric strike interlock, gate reset/check station, etc.).
2. Emergency exit gates will not have external door handles but will otherwise be fully operational through the PASS system with a standard gate configuration (i.e. dual door switches, electric strike interlock, interior gate reset/check station, etc.).

The gate configuration and access controls for the RHIC sextant test will be presented to the full RSC for review by R. Frankel and P. Sparrow. Any comments and suggestions regarding this preliminary review should be forwarded to R. Frankel and K. Reece.

cc: RSC (w/attachments)
RSC file (W/attachments)

