

Monday 3 March 1997

K. Reece

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Minutes of Meeting: Radiation Safety Committee

Date: Thursday 13 February 1997

Present: L. Ahrens, E. Bleser, A. Etkin, W. Glenn, E. Lessard, A. McGeary, K. Reece, C. Schaefer, A. Stevens, R. Thern.

Subject: AGS J-10 Scraper.

A new scraper will be installed in the AGS ring to become the primary limiting aperture and therefore localize the majority of the beam loss to one location. This location was originally the E-20 Catcher, but this new scraper (@ the J-10 straight section) will have several improvements that may help to better constrain the loss distribution. The AGS ALARA committee has already conducted a review and made some recommendations to further limit personnel exposure while walking by and/or working on or near this device.

Ed Bleser presented details of the J-10 scraper design and its use (along with the associated orbit bumps) in the AGS ring, (attachments). The following items were discussed;

1. As in the ALARA review, it was proposed that the cooling water for this device be placed on the SEM (special ejection magnet) system to isolate it from the main magnet return water. This could be done by extending the water system from I-10 (Snake) to J-10 and switch only one magnet in the water circuit at a time.
2. An estimate of the possible J-10 scraper return water activation levels could be done by placing the E-20 Catcher on the SEM system this year.
3. Soil activation is estimated to be <50% of the ALARA guide for ^{22}Na . This may be reduced by an order of magnitude with the installation of a liner over the J-10 region.
4. The shielding adjacent to the J-7 location appears to be less than in other nearby areas. This should be documented prior to commissioning, (CK-AGS-J10-01).
5. Penetrations in the area around J-10 should be documented, (CK-AGS-J10-02).

6. The possible muon beam from the J-10 scraper could be $\sim 6\text{mrem/hr}$ (assuming $> 40\text{m}$ decay path and the full berm side-shield. This could be reduced by placing shielding close-in by the J-10 scraper, thereby reducing the decay path, **(CK-AGS-J10-03)**.

7. A muon beam from a loss upstream of J-10 (\sim due to orbit bumps and/or orbit displacement) could (?) then be directed through the North Conjunction shield wall. This should also be investigated, **(CK-AGS-J10-04)**.

The RSC approved the use of this new J-10 scraper. It must be commissioned with the above questions addressed before routine operation.

cc: RSC file