

Minutes of the RSC Sub-Committee to Examine the Radiation Protection Outside the North Conjunction Area and Examine Higher than Expected Radiation Levels in Building 912, June 1 and 2, 1994

Attendees: K. Reece, A. Pendzick, H. Brown, E. Njoku, D. Beavis (June 2), and E. Lessard

North Conjunction Area

The continuing objective outside the North Conjunction Area is to make it Uncontrolled for construction workers. Measurements (see attached) on the roofs of the two new concrete structures that are being built-up indicates that "roofers" may spend only 40 hours rather 80 hours in that area. The 80 hour occupancy was established by the RSC (see May 26 RSC Sub Committee minutes). Roofers are planned to be in the area from June 6 to June 10.

C. Pearson has established a 40-hour occupancy for all construction workers in all g-2 areas during the AGS running period. He has asked Jake Feldmen of PE to log all construction personnel by name, and to track their hours. It was felt the 40 hour occupancy would not hinder any construction activities.

The location of the area-radiation monitor was re-examined by the sub committee to ensure its response was proportional to the newly measured roof levels. The committee agreed that a 3 mrem alarm level would still be appropriate.

The Uncontrolled Area is now designed to limit people to about 12 mrem maximum, and 25 mrem to roofers. This is in agreement with the BNL design limit. Al Pendzick was asked to collect the names of those 3 to 5 persons who had worked on insulation on the concrete structures on May 12 and 13, 1994. We plan to indicate to the S&EP Division that these individuals received an inadvertent exposure of about 30 mrem mostly from muons.

Building 912

Several areas have higher than expected radiation levels in Building 912. These are:

1. the catwalk (40 mrem/h) and trailer #151 (1 mrem/h) near the D6 beam line,
2. the walkway between Building 911 and 912 starting from the MCR (up to 85 mrem/hour along the wall leading into the switchyard), and
3. near the C-3 beam line (70 mrem/hour).

These levels are all within the Radiation Area criteria, between 5 and 100 mrem/hour. Our "design" for the running period is limited to no more than 500 mrem per person during the year. This is a requirement in the RadCon Manual. Thus, we need to do several things:

1. examine occupancy of these areas,
2. do quality factor measurements to rule in/out the presence of shine from short-lived gamma emitters in the water systems, and
3. post the areas with as much information as deemed appropriate.

These areas are largely not occupied except for trailer #151. It would be suitable to assume a 5% occupancy in these areas in Building 912, except for the trailer that has 40 hour per week occupancy. This means about 20 hours could be spent in these areas in the next 10 weeks by a hypothetical individual. This means we should be shooting for less than 25 mrem/hour in our hottest "unoccupied" areas in Building 912 or we should begin to restrict access.

An additional radiation safety issue was addressed, contamination in the C 3 beam line. It appears that suitable procedures exist for handling contaminated materials. A. Pendzick will check if Hubbard has the procedures in place. It was recommended that potential "handlers" of contaminated vacuum systems be trained in "Contamination Worker Training." A. Pendzick will identify training candidates and E. Njoku will identify the course, either the new training to be offered by S&EP or an in-house version specific to our problems.

The sub committee will meet on Friday, June 3 at 11 A.M. to review quality factor measurements. K. Reece has drawn up a map of where measurements are desired (see attached). On the basis of quality factor, occupancy of certain areas in and around Building 912 will be re-examined.

E. Lessard