

Tuesday 23 August 1994

K. Reece



Minutes of meeting: RSC sub-committee Tuesday 23 August 1994

Present: R. Frankel, S. Musolino, K. Reece, A. Stillman

Subject(s): Chipmunks

As has been documented in memos to the Radiation Safety Committee (RSC files), two failure modes have been identified in the present AGS chipmunks. The first mode eliminates the "chirping" of the chipmunk, but the second mode is of greater consequence in that it disables the interlock function of the chipmunk. Both the AGS and RHIC purchase orders for additional chipmunks have been put on hold until the RSC reviews the necessary changes to the hardware. This RSC sub-committee has requested that the engineering experts meet to agree on the details of the proposed modifications and notify this sub-committee chair (Musolino) of their intentions. Once reviewed and approved by the RSC, a schedule to refurbish and test all the existing AGS chipmunks will be developed.

Other suggested modifications (Frankel) for the RHIC generation chipmunks include the following:

1. run multi-twisted pair (shielded) to each chipmunk.
2. distribute 24VDC to each chipmunk and convert locally to 110VAC; the National Electric Code prohibits 110VAC to be run in the same tray as signal cables. The inverter used will be thoroughly tested before adopted for use.
3. bring the "interlock" output and the "failsafe" output (now combined) back to the PLC separately.
4. use the 25uRem/pulse output, cabled via the multi-pair cable, into the PLC's for monitoring the chipmunk rate. This will be available for use in the MCR to monitor the real-time rates.

There was some discussion as to whether the RSC should investigate newer technology chipmunks. A proposal was to strike a compromise and purchase a minimum set of modified "old" chipmunks (but ONLY after the necessary modifications have been approved) to cover present AGS and initial RHIC commissioning needs. Simultaneously, this sub-committee will investigate options for chipmunk replacements.

Another open question concerned the RHIC commissioning chipmunks and whether the 2.5uRem/pulse output should be run to the present PDP-10 monitoring program. An output will be available in the MCR for monitoring via another means (to be determined). This would involve a cabling expense as well as access to DATACON or VME connections and will provide at some level, redundant information.

Sub-committee recommendations;

1. chipmunk documentation (drawings) should be QA1.
2. the RSC must review and approve ANY modifications to the chipmunks prior to implementation.
3. the engineering review for the two known faults will include R.Frankel, A.Stillman, W.Sims, V.Castillo & A.Soukas.
4. approximately 24 (refurbished) chipmunks should be purchased, (13 for RHIC commissioning and 11 for the AGS (g-2 use)).

cc: RSC  
RSC file.

Attachment - File Only