

9 October 2002

MEMORANDUM

A/To: G. Daems/DSO PS, C. Hill/RSO PS, R. Brown/TSO

c.c.: H. Menzel/TIS

De/From: M. Silari/TIS

Concerne/Subject: **Declassification of PS control room (MCR)**

Measurements of integrated dose equivalent performed over a period of three months in front of the MCR and of the adjacent conference room have shown radiation levels compatible with its classification as a supervised area rather than as a controlled radiation area. The attached drawing shows the measuring points and the integrated dose equivalent recorded by TLD dosimetry. Subtracting the natural background, the “net” values are 0.190 mSv gamma and 0.130 mSv neutrons for TLD No. 2196, 0.160 mSv gamma and 0.020 mSv neutrons for TLD No. 1744, 0.210 mSv gamma and 0.110 mSv neutrons for TLD No. 2197. The reading of PAXS34 is too high because the monitor uses a calibration factor for neutrons, whilst the measurements show that about $\frac{3}{4}$ of the dose in this area is due to gammas. Using a calibration factor for gamma brings the indication of PAXS34 in line with the TLD results.

The neutron dose equivalent clearly comes from PS operation. Even cautiously assuming that the gamma dose comes entirely from radioactive material stored in the South Hall, i.e. it is not linked to the PS operation but it is rather constant through the whole year, the annual effective dose received by personnel spending its entire working time (assumed as 2000 hours/year) in the MCR or in the adjacent conference room will not exceed the value of 1 mSv in 12 months, the legal limit beyond which an area as to be classified as controlled radiation area according to the Radiation Safety Manual.

The MCR and the conference room, as well as the access gangway, can thus be classified as supervised area, where wearing of a film badge is not required. The rest of the South Hall remains controlled radiation area. The radiation warning panels have been displaced accordingly.