

NCRP Commentary No. 16, *Screening of Humans for Security Purposes Using Ionizing Radiation Scanning Systems*

NCRP Commentary No. 16, *Screening of Humans for Security Purposes Using Ionizing Radiation Scanning Systems*, was published by the National Council on Radiation Protection and Measurements (NCRP) in 2003. It presents radiation protection advice concerning ionizing radiation-producing devices that are used to screen air travellers for security purposes.

Government agencies and other institutions are using ionizing radiation scanning systems for national security, protection of life, and detection of contraband. These applications involve scanning members of the general public. The benefit of such procedures is to a segment of society or society as a whole, as would be the case for detection of contraband or national security.

The Commentary states that general-use systems should adhere to an effective dose of 0.1 microsievert (μSv) (0.01 millirem) or less per scan, and can be used mostly without regard to the number of individuals scanned or the number of scans per individual in a year. An effective dose of 0.1 μSv (0.01 mrem) per scan would allow 2,500 scans of an individual annually [*i.e.*, if each scan required 0.1 μSv (0.01 mrem)] without exceeding the administrative control of 0.25 mSv (25 mrem) to a member of the general public for a single source or set of sources under one control. Assuming 250 workdays per year, this would correspond to an average of 10 scans each day, a frequency that is unlikely to be encountered.

As stated in NCRP Report No. 121 (1995), *Principles and Application of Collective Dose in Radiation Protection*, the summation of trivial average risks over very large populations or time periods into a single value produces a distorted image of risk, completely out of perspective with risks accepted every day, both voluntarily and involuntarily.

The Commentary is available from the NCRP website, <http://NCRPpublications.org>, in both soft- and hardcopy formats. For additional information contact David A. Schauer, ScD, CHP at schauer@NCRPonline.org, 301.657.2652 (x20) or 301.907.8768 (fax).