



Executive Summary



- The subject effective dose is within the requirements of ANSI/HPS N43.17-2002, 5.1
 - Individual effective dose per screening (frontal and rear scan) of a subject is [REDACTED], less than the 10 urem (0.10 uSv) limit
 - (b)(4) - Individual effective dose is below 25 mrem if an individual is subject to fewer than [REDACTED] screenings in a twelve-month period (equivalent to [REDACTED] screenings per day)
 - Individual effective dose is below Negligible Individual Dose (NID) if an individual is subjected to fewer than [REDACTED] screenings in a year (based on [REDACTED] urem/screening)
- **Additional action is recommended** to ensure that the National Council on Radiation Protection and Measurements (NCRP 1993) general public dose recommendation of less than 100 mrem (0.1 rem) per year is being met (ANSI/HPS N43.17-2002, 5.3) Specifically:
 - An area exists above each of the units, due to primary beam overshoot, where the 100 mrem per year general public dose limit could potentially be exceeded. This area extends up to a height of about 14 ft and 4.6 ft behind each of the units. (reference slide 9)
 - It is recommended that a survey of each installation site be conducted or a beam stop be considered to ensure that the dose to any member of the general public is maintained below the 100 mrem (0.1 rem) per year general public limit and to ensure that doses are kept "As Low As Reasonably Achievable" (ALARA).



Dose to General Public



- Standard: NCRP 1993 recommends that members of the general public receive less than 1 mSv (0.1 rem) per year. These levels are subject to the radiation safety principle of ALARA. (ANSI/HPS N43.17-2002, 5.3 Dose minimization and Negligible Individual Dose)

Preliminary Assessment Results:

- An area exists above each of the units, due to primary beam overshoot, where the 100 mrem per year general public dose limit could potentially be exceeded. This area extends up to a height of about 14 ft and 4.6 ft behind each of the units.
- The estimated annual dose and the associated exposed area is based on the maximum exposure readings taken at the time of the survey and from approximate geometric measurements of the x-ray beam path. A more precise measurement of the geometry, which was not possible due to the location of the system being evaluated, would provide a better understanding of the area's boundaries.
- It is recommended that a survey of each installation site be conducted or a beam stop be considered to ensure that the dose to any member of the general public is maintained below the 100 mrem (0.1 rem) per year general public limit and to ensure that doses are kept ALARA.

