Meeting of RASSC, EPRsSC, TRANSSC, WASSC and NSGC

November 2017

Draft Safety Guide DS471 Radiation Safety of X-ray Generators and other Radiation Sources Used for Inspection Purposes and for Non-Medical Human Imaging

For approval for submission to CSS

Technical Officer: Trevor Boal  → Olga German, NSRW
Background

GSR Part 3 contains requirements in relation to human imaging for non-medical purposes, to strengthen the regulatory control over such practices.

Radiological Protection in Security Screening, ICRP Publication 125, Ann. ICRP 43(2), 2014


Scope

• Target audience: Operators, RP officers, regulatory bodies, designers and manufacturers.
• Assumes that a proper regulatory infrastructure exists in a country.
• Topics covered:
  – recommendations and guidance on protection and safety for X ray generators and other types of radiation sources that are used for inspection purposes and for non-medical human imaging,
  – considers the occupational exposure of workers, members of the public and exposure of persons while undergoing non-medical human imaging procedures.
• Out of scope:
  – specific guidance on security aspects,
  – Medical exposure.
Structure of the document

1. INTRODUCTION
   - Background
   - Objective
   - Scope
   - Structure

2. THE USE OF X RAY GENERATORS AND RADIATION SOURCES FOR INSPECTION PURPOSES

3. Description of Inspection Devices
   - Framework for Radiation Protection and Safety
   - Application of Radiation Protection Principles
   - Graded Approach
   - Radiation Protection and Safety Programme
   - Management of Disused Sealed Radioactive Sources
   - Investigation of Events
   - Emergency Preparedness and Response

3. THE USE OF X RAY GENERATORS FOR NON-MEDICAL HUMAN IMAGING
   - Types of Equipment Used for Non-medical Human Imaging
   - Framework for Radiation Protection and Safety for Non-medical Human Imaging
   - Application of Radiation Protection Principles
   - Radiation Protection and Safety Programme
   - Investigation of Events

APPENDIX DOSE LIMITS FOR PLANNED EXPOSURE SITUATIONS
## Comments from MS received in 2016 and 2017

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<th>Rejected</th>
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Some highlights from the resolution of comments:

- **There is no information dealing with animal imaging with category I and II non-medical human imaging devices in this guide. It is suggested to provide appropriate guidance in this case** – comment rejected, as animal exposure was out of scope of the guide, but we are working on a Safety Report on Radiation Safety in Veterinary.

- **Majority of comments point out wrong internal or external referrals** – all accepted. Use automatic referral option in Word to avoid confusion and this extra work for MS and ourselves.
Status

• Step 11
• Approved by the IAEA Coordination Committee, August 2017
• Approved by EPReSC November 7, 2017
• Awaiting approval from:
  – RASSC – leading
  – WASSC, NSGC, TRANSC
Action Requested

You are kindly requested to approve the submission of DS471 “Radiation Safety of X ray Generators and other Radiation Sources Used for Inspection Purposes and for Non-Medical Human Imaging” to the CSS
Thank you!