42nd Meeting of the Radiation Safety Standards Committee

12-14 June 2017

Agenda Item: Draft Safety Report
Design and Implementation of Representative Indoor Radon Surveys

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Outline

• Background/why this document?
• Scope
• Development
• Structure/Key Points
• Annexes
• Next Steps
BACKGROUND - WHY THIS DOCUMENT?
Why this document?

• GSR Part 3- International Basic Safety Standards (BSS):

  Requirement 50: “The government shall provide information on levels of radon indoors and the associated health risk, and if appropriate, shall establish and implement an action plan for controlling public exposure due to radon indoors”.

Why this document?

• GSR Part 3- International Basic Safety Standards (BSS):

Para. 5.19(a): “the government shall ensure that information is gathered on activity concentrations of radon in dwellings and other buildings with high occupancy factors for members of the public through appropriate means, such as representative radon surveys”.
Why this document?

• SSG-32: Protection of the Public against Exposure Indoors due to Radon
  – Provides useful information for indoor radon
    • Indoor exposure due to $^{220}$Rn, $^{222}$Rn, gamma radiation
    • Covers homes and workplaces
  – Not specifically for guidance
    • Need a document to help achieve the first steps toward creating representative indoor radon surveys
Why this document?

• Many existing surveys not fully ‘representative’

• Meeting held in 2014 set a guidance document as a priority
  – A more specific, pre-‘action plan’ guide to creating regional, representative indoor radon surveys for homes
SCOPE
Scope

• Homes
  – Same principles can be used for schools/workplaces

• Local, regional, or national surveys

• $^{222}$Rn
  – $^{220}$Rn (thoron) not covered, guidance given in SSG-32
DEVELOPMENT
Development

- Consultant’s meetings:
  - October 2016
    - Jeff Whyte (Health Canada), Valeria Gruber (Austrian Agency for Health and Food Safety - Radiation Protection), Najat Amechmachi (National Center for Energy Sciences and Nuclear Techniques, Morocco)
  - April 2017
    - Barbara Rafferty (EPA Ireland)
Structure/Key Points

• Assessing the need for a survey
• Conducting screening surveys
• Designing a survey:
  – Recruitment of participants
  – Choice of detector
  – Measurement duration and location
  – Recognize/minimize bias
  – QA/QC
Structure/Key Points

• Implementing a survey:
  – Detector distribution and collection
  – Data validation/analysis
  – Data mapping
  – Reporting results to participants

• Sample questionnaire
ANNEXES
Annexes

• 11 national/regional radon survey examples
  – Argentina, Australia, Austria, Bulgaria, Canada, Iceland, Iran, Ireland, Italy, Montenegro, USA

• Why these countries?
NEXT STEPS
Next Steps

• Finalize end of July
• Additional annexes
Next Steps

• Comments (81 so far)
  – 8 countries
    • Morocco, Canada, Czech Republic, Austria, Australia, Italy, Iceland, Bulgaria
    • World Health Organization
  – Mainly editorial
    • Some technical clarifications, reference updates, etc.