IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Panel on Protection of workers, public and environment

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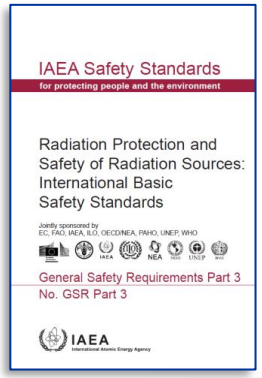
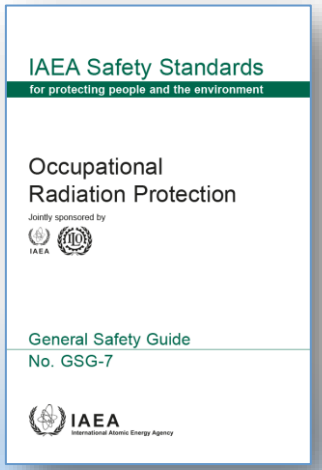
International Basic Safety Standards

- **An integrated and consistent set of Safety Requirements** that establishes the requirements that must be met to ensure the protection of people and the environment, both now and in the future.

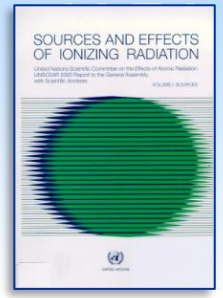


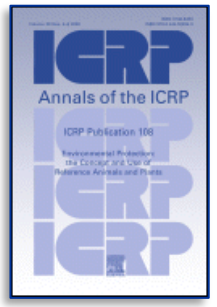


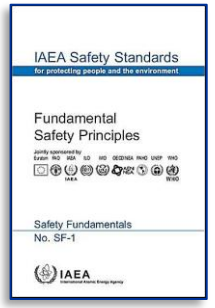
- GSR Part 3 (BSS) follows ICRP 103 recommendations
- Protection and Safety requirements of the BSS apply to all facilities and activities
- **Planned, emergency and existing exposure situations**
- **Occupational,** public and medical exposure categories
- 52 overarching requirements – for **governments, regulatory bodies, industry, health and safety professionals, workers**, public and **service providers** such as technical support organizations
- **12 requirements for ORP**; Control, monitoring and recording
- **Regulators, TSPs** (authorization or approval of service providers for individual monitoring and calibration services) & **Operators**

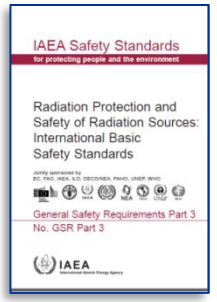
Occupational Exposure

- All exposure of workers incurred in the course of their work
  - Workers are exposed to ionizing radiation in a wide range of occupational settings (artificial & natural)
- Over 23 million monitored workers worldwide (57% - 13 million, exposure natural sources of radiation workers; 43% - 10 million, man-made source; 860,000-nuclear industry, 870,000 -industry, 3.5 million - medical), *numbers continue to increase*
- Area with multiple actors (global / national level)
  - Requirements for protection of workers (IAEA - ILO)
  - Ministries, Regulators, OHS, etc.
- Safety Standards - To protect occupationally exposed workers against the risks associated with ionizing radiations - **Overall objective**
- ORP, which is getting more industry characteristics, is resolving itself in favour of **personalized, highly efficient and reliable methods and approaches**.









RP of workers in NORM involving processes

- Stakeholders (national level setting): RB, Operator and TSPs
- Characterization (measurement, assessment and interpretation)
- Integration of RP into OHS (holistic approach)
  - Industrial hygiene, industrial safety, fire safety, etc.
- Qualified experts (RP consultancy services)
- Monitoring arrangements (workplace and individual)
  - Required in the early phase of operation
  - (Compliance and liability)

RP of workers in NORM involving processes

- Development of international safety standards and supporting documents with priority on topics to address challenges
- Further information to support application of graded approach for regulation of NORM industrial processes including their residues based on good knowledge and understanding of the diverse industrial sectors (Safety Reports)
  - Application of relevant safety standards to improve consistency amongst thematic aspects, industry sectors, different regulatory bodies, and amongst Member States
- A new network for industrial processes by extending the Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR) platform with a module specific to NORM industrial processes (ISEMIR-N)
- Occupational Radiation Protection Appraisal Service (ORPAS) offer assessment on national arrangements for regulatory infrastructure and occupational exposure control in different facilities and activities including NORM sites against Safety Standards. Member States and industry are encouraged to use this independent assessment for global harmonisation.

Challenges

- Application of the graded approach for regulation of industrial processes involving NORM including their residues, based on good knowledge and understanding of the diverse industrial sectors.
- Synergies and system optimization with integrated consideration of radiological and non-radiological hazards.
- Limited experience in radiation protection for many industry sectors concerned.
- Siting and long-term management of bulk amount of NORM residues, including consideration of institutional control and financial aspects.
- Remediation of legacy sites and care of these lands after remediation.
- Reuse and recycle of NORM residues for avoidance of the need of long-term management and disposal.
- Stakeholder trust is essential to develop a common language for engaging open and transparent dialogues with stakeholders.

Thank you

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