The new Euratom Basic Safety Standards Directive
Requirements on occupational radiation protection

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Legal Basis:
The Euratom Treaty (1957)

**Article 2:** In order to perform its tasks, the Community shall establish **uniform standards** to **protect the health of workers** and of the general public and ensure that they are applied; [...]  

**Article 30:** **Basic standards** shall be laid down within the Community for the **protection of the health of workers** and the **general public against dangers** arising from ionising radiations. [...]  

**Article 31:** The **basic standards** shall be worked out by the Commission after it has obtained the opinion of a group of persons appointed by the Scientific and Technical Committee from among scientific experts, and in particular public health experts, in the Member States ...
Basic Safety Standards

Ensure the highest possible protection of workers, members of the public and patients against the dangers arising from exposure to ionising radiation


New Basic Safety Standards:

Supplementary elements
- Drinking water quality
- Food and feed – maximum permissible contamination levels after a nuclear accident
- Information exchange in case of a nuclear accident or radiological emergency
  - ECURIE (European Community Urgent Radiological Information Exchange)
  - EURDEP (EUropean Radiological Data Exchange Platform)
The 2013 Revision
Motivation and Objective of the 2013 Revision

Modernisation of European Radiation Protection Legislation

- Take account of latest scientific findings (e.g. ICRP 2007), technological development as well as operational experience since 1996
- Cover all radiation sources – including natural radiation
- Cover all exposure situations – planned, existing, emergency
- Integrate protection of workers, members of the public, patients and the environment
- Harmonise, to the extent possible, numerical values with international standards

Consolidation and streamlining of existing pieces of legislation

- Combining five existing Euratom Directives and one Recommendation
  - Basic Safety Standards, Directive 96/29/Euratom
  - Medical Exposures, Directive 97/43/Euratom
  - Public Information, Directive 89/618/Euratom
  - Outside Workers, Directive 90/641/Euratom
  - Control of high-activity sealed radioactive sources and orphan sources, Directive 2003/122/Euratom
  - Radon, Commission Recommendation 90/143/Euratom

- Better protection of **workers**, in particular medical staff, emergency workers and workers in workplaces with natural radiation sources (indoor radon; activities processing naturally occurring radioactive material (NORM));

- Better protection of the **public**, in particular from radon in dwellings, from exposure from NORM activities and building materials and from deliberate exposure for non-medical purposes;

- Better protection of **patients**, in particular with regard to the avoidance of incidents and accidents in radiodiagnosis and radiotherapy;

- Strengthened requirements on **emergency preparedness and response**, especially with a view to the lessons learned from the Fukushima accident.
Protection of workers
Protection of workers in the previous BSS (96/29/Euratom)

- Provisions in the previous BSS (Directive 96/29/Euratom) provide already a very high level of protection for workers through
  - Dose limitation
  - Measures for the restriction of exposure
    - Classification and delineation of areas
    - Classification of exposed workers
    - Assessment of the implementation of arrangements for the radiological protection of exposed workers
  - Assessment of exposure
    - Monitoring of the workplace
    - Individual monitoring
    - Monitoring in case of accidental or emergency exposure
    - Recording and reporting of results
  - Medical surveillance of exposed workers
  - Information and training
Improving worker protection

- Dose limit for occupational exposure now 20 mSv in any single year
- Dose limit for the lens of the eye lowered to 20 mSv per year
- Contents of Outside Workers Directive fully integrated
  - Clear definitions
  - Clear assignment of responsibilities for undertaking/operator, employer and outside worker
- Occupational radiation protection regime consistently applied also to
  - Workers in activities involving NORM
  - Workers in workplaces with Radon
  - Air crew and space crew
  - Emergency workers
- Establishment of a data system to register and record occupational exposures
Emergency workers

- Information and training
  - Prior to an emergency
  - When the emergency occurs

- Protection of emergency workers
  - Provide for appropriate radiological monitoring and protective equipment
  - Emergency occupational exposures shall remain below dose limits
  - Provide for special medical surveillance
  - If dose limits cannot be respected
    - Establish specific reference levels ≤ 100 mSv
    - Inform workers about associated health risks and available protection measures
    - Ensure that workers undertake these actions voluntarily

"emergency worker" means any person having a defined role in an emergency and who might be exposed to radiation while taking action in response to the emergency;
Radon in workplaces

- Establishment of a national radon action plan
- Establishment of a national reference level for indoor radon concentration in workplaces \( \leq 300 \text{ Bq/m}^3 \)
- Identification of radon prone areas

Radon measurements in workplaces
  - Radon prone areas
  - Specific types of workplaces identified in the national action plan

If radon concentrations remain > national reference level (despite optimisation)
  - Notify the competent authority
  - Introduce occupational exposure arrangements
    - > 6mSv/a Situation to be managed as a planned exposure situation
    - \( \leq 6\text{mSv/a} \) Exposures need to be kept under review
Adoption, transposition and implementation
Adoption and beyond

- **Article 31 Group of Experts Opinion** – 24 February 2010
- **Commission draft proposal** – 29 September 2011
- **European Economic and Social Committee** favourable Opinion – 22 February 2012
- **Commission proposal** – 30 May 2012
- **Legislative Resolution of the European Parliament** – 24 October 2013
- **European Council** formal adoption of the proposal – 5 December 2013
- **Publication in the Official Journal of the European Union** – 17 January 2014

28 Member States of the European Union will have **four years** to transpose this comprehensive Directive into national legislation

- **99 definitions**, **109 articles** and **19 annexes**

**Article 106**

**Transposition**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 6 February 2018.
Résumé

- Previous BSSs provided already for a very high level of protection for workers in Europe

- European radiation protection legislation consolidated and modernised
  - Further improvement of the protection of workers, in particular of medical staff, outside workers, emergency workers and workers in workplaces with natural radiation sources (indoor radon; naturally occurring radioactive material (NORM))
  - European Union Member States have until February 2018 to transpose the Directive into national legislations
Thank you for your attention