



Overview of the new requirements in Euratom BSS Council Directive 2013/59/EURATOM

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Revision of Euratom BSS

Two objectives:

- Revision of the requirements in the Euratom Basic Safety Standards Directive 96/29/Euratom, taking into account ICRP 103
- Consolidation of existing European radiation protection legislation:
 - 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**



Outline of new Euratom BSS

- Preamble
- Chapter I: Subject matter and Scope
- Chapter II: Definitions
- Chapter III: System of Protection
- **Chapter IV: Requirements for Radiation Protection Education, Training and Information**
- Chapter V: Justification and Regulatory control of practices
- Chapter VI: Occupational exposures
- Chapter VII: Medical exposures
- Chapter VIII: Public exposures
- **Chapter IX: General responsibilities of member states and competent authorities and other requirements for regulatory control**
- Chapter X: Final provisions



Chapter I: Subject matter and Scope

Scope

- This Directive applies to any planned, existing or emergency exposure situation which involves a risk from exposure to ionising radiation which cannot be disregarded from a radiation protection point of view or with regard to the environment in view of long-term human health protection

Now includes

- Domestic radon
- Building materials
- Aircraft & spacecraft in relation to exposure of crews
- The processing of NORM



Chapter II: Definitions

Defines the terms used in the Directive – based on the 5 Directives included in the recast process, and updated for compatibility with ICRP 103.

- **New**
 - **Non-medical imaging**
 - **RPE, MPE, RPO**
 - **Emergency & emergency exposure**
 - **Outside Workers – now includes persons in supervised areas**
 - **“Orphan sources”**



Chapter III: System of Protection

- Dose constraints – a tool for optimisation
- Reference levels - for emergency & existing exposure conditions
- Dose limits
 - No further need for averaging
 - Dose limit for lens of the eye is reduced
- the limit on the equivalent dose for the lens of the eye shall be 20 mSv in a single year or 100 mSv in any five consecutive years subject to a maximum dose of 50 mSv in a single year, as specified in national legislation.
- **Was:** the limit on equivalent dose for the lens of the eye shall be 150 mSv in a year;



Chapter IV: Requirements for Radiation Protection Education, Training and Information

- MS shall ensure that an adequate legislative and administrative framework is established for providing appropriate radiation protection education, training and information to all individuals whose tasks require specific competences in radiation protection.
- MS shall ensure that arrangements are made for the establishment of education, training and retraining to allow the recognition of radiation protection experts and medical physics experts, as well as occupational health services and dosimetry services, in relation to the type of practice.
- MS may make arrangements for the establishment of education, training and retraining to allow the recognition of radiation protection officers, if such recognition is provided for in national legislation.



Chapter IV: Requirements for Radiation Protection Education, Training and Information

- Information and training of exposed workers, apprentices and students **and workers potentially exposed to orphan sources**
- Provision of information on relevant parts of emergency response plans
- The employer of outside workers to provide required information and training
- The undertaking to provide radiation protection and training programmes for exposed workers
- Specific training requirements for HASS sources
- Prior information and training for emergency workers



Chapter IV: Requirements for Radiation Protection Education, Training and Information

- Education, information and training in the field of medical exposure
 - incorporating existing requirements from the MED
 - mandatory introduction of a course on radiation protection in the basic curriculum of medical and dental schools
 - dissemination of appropriate information relevant to radiation protection in medical exposure on lessons learned from significant events



Chapter 5: Justification and Regulatory control of practices

Practices involving the deliberate exposure of humans for non-medical imaging purposes

- **Focus on justification**
- **Using medical equipment**
 - **Relevant medical exposure requirements apply, including individual justification, training, MPE input**
- **Using Non-medical equipment**
 - **Justification of practice, dose constraints less than 1 mSv,**
- **Information provided to exposed individual**



Chapter 5: Justification and Regulatory control of practices

Graded approach to regulatory control

- **Exemption (of justified practices), notification, authorisation (registration or licensing)**
- **Licensing required for:**
 - **Administration of radioactive substances to persons**
 - **Nuclear sites, uranium mines**
 - **Radioactive consumer products**
 - **Practices involving HASS sources**
 - **Radioactive waste storage facilities**
 - **Discharging airborne or liquid waste to the environment**



Chapter VI: Occupational exposures

- Undertaking to obtain advice from RPE
- Requirements for aircrew
- Arrangements for outside workers
- Arrangements for emergency workers
- Radon in workplaces:
 - Reference level 300 Bq m⁻³



Chapter VII: Medical exposures

- ❑ Requirements from Medical Exposures Directive
- ❑ Consultation with MPE on matters relating to radiation protection concerning medical exposure
- ❑ new requirements for informing patients, recording patient doses, and recording, reporting and follow-up of accidental and unintended exposures

the patient or their representative is provided with adequate information relating to the benefits and risks associated with the radiation dose from the medical exposure. Similar information as well as relevant guidance shall be given to carers and comforters



Chapter VIII: Public exposures

- **Emergency response arrangements**
 - Information to the members of the public likely to be affected in the event of an emergency
 - Information to the members of the public actually affected in the event of an emergency
- **Indoor exposure to radon**
 - Reference level 300 Bq m^{-3}
 - Provision of information
- **Gamma radiation from building materials**
 - Reference level of 1 mSv/y
 - Measures for building materials of concern



Chapter IX: General responsibilities of member states and competent authorities and other requirements for regulatory control

- Designation of competent authorities
- Recognition of the RPE & MPE
- The role of the RPE
- The role of the MPE
- The role of the RPO
- Requirements for control & licensing of HASS sources
- Orphan sources
 - Detection of orphan sources
 - Systems for the detection of radioactive material in metal products and scrap metal
 - Financial security



Chapter IX: General responsibilities of member states and competent authorities and other requirements for regulatory control

❑ Existing exposure situations

- Strategies for the management of existing exposure situations

❑ National radon action plan

- Identify areas with potentially high radon concentrations
- Strategy for conducting surveys
- Reference levels
- Remedial action strategies
- Strategy for new buildings
- Strategy for communication to increase public awareness and inform local decision makers, employers and employees of the risks of radon, including in relation to smoking

