

## **The RPE and the RPO in the proposed European Basic Safety Standards Directive**

### **Reflections from EUTERP and BVS/ABR**

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## **European Directive 96/29/Euratom**

- Qualified Experts:
  - Persons having the knowledge and training needed to carry out physical, technical or radiochemical tests enabling doses to be assessed, and
  - to give advice in order to ensure effective protection of individuals and the correct operation of protective equipment,
  - whose capacity to act as a qualified expert is recognized by the competent authorities.
  - A qualified expert may be assigned the technical responsibility for the tasks of radiation protection of workers and members of the public.



## **Advice of the BVS/ABR 1998**

- Working group BVS/ABR:
  - ensure adequate radiation protection expertise
  - ensure adequate number of experts
  - advise to the legislator:
    - additional training course of 120 h in radiation protection
    - same course whatever the working field
    - legal recognition: practical radiation protection experience can be expected
  - advise included in the Royal Decree on Radiation Protection (20/07/2001)



## European survey 2002

- considerable variation among the Member States
  - in the national regulations
  - in the interpretation and implementation of the definition of the Qualified Expert
  - obstacles for mutual recognition
  - obstacle for free mobility of radiation protection professionals



## EUTERP

- 2006: EUTERP Platform:
  - European Platform on Training and Education in Radiation Protection
  - EUTERP workshops:
    - Vilnius 2007
    - Vilnius 2008
    - Antalya 2009
    - Cyprus 2011



## EUTERP Discussion

- Qualified Experts (BSS96):
  - Persons having the knowledge and training needed to carry out physical, technical or radiochemical tests enabling doses to be assessed, and
  - to give advice in order to ensure effective protection of individuals and the correct operation of protective equipment,
  - whose capacity to act as a qualified expert is recognized by the competent authorities.
  - A qualified expert may be assigned the technical responsibility for the tasks of radiation protection of workers and members of the public.



## EUTERP Discussion

- definition of 'Qualified Experts': ambiguous
  - no distinction between
    - the need for professional expert advice in radiation protection
    - the need for practical supervision and for technical responsibility
- conclusion (2007-2008):
  - introduction of the concepts of
    - *radiation protection expert* RPE
    - *radiation protection officer* RPO
  - requirements for the undertakings



## RPO/RPE in EUTERP / proposed BSS (art. 4)

- (83) Radiation protection officer means
  - an individual who is technically competent in radiation protection matters relevant for a given type of practice and
  - is designated by the undertaking to oversee the implementation of the radiation protection arrangements of the undertaking
- (42) Radiation protection expert means
  - an individual having the knowledge, training and experience needed
  - to give radiation protection advice in order to ensure the effective protection of individuals, and
  - whose capacity to act is recognised by the competent authorities



## Requirements for the undertakings proposed BSS (art. 68)

1. Member States shall require the undertaking to carry out the following tasks:
  - (a) achieving and maintaining an optimal level of protection;
  - (b) checking the effectiveness and maintenance of technical devices;
  - (c) acceptance into service, from the point of view of surveillance of radiation protection, of equipment and procedures for measuring and assessing, as appropriate, exposure of members of the public and radioactive contamination of the environment;
  - (d) regular calibration of measuring instruments and regular checking that they are serviceable and correctly used.
2. Radiation protection experts and, as appropriate, radiation protection officers shall be involved in the performance of the tasks referred to in paragraph 1.



## Requirements for the RPE EUTERP

- the RPE should be competent:
  - to analyse and interpret ...
  - to advise the licensee and the RPO on ...
  - to advise the licensee and the RPO on ...
  - to advise the licensee and the RPO on ...
  - to be able to communicate (advise, instruct, persuade, train) ...
- will be mostly a relatively senior, often external consultant (?)



## RPE-Requirements for the undertakings proposed BSS (art. 32)

- Member States shall require the undertaking to consult a radiation protection expert on the examination and testing of protective devices and measuring instruments, in particular for:
  - (a) prior critical examination of plans for installations from the point of view of radiation protection;
  - (b) the acceptance into service of new or modified radiation sources from the point of view of radiation protection;
  - (c) regular checking of the effectiveness of protective devices and techniques;
  - (d) regular calibration of measuring instruments and regular checking that they are serviceable and correctly used.





## Requirements for the RPE proposed BSS (art. 84)

1. The radiation protection expert shall, on the basis of professional judgment, measurements and assessments, give competent advice to the undertaking on matters relating to occupational exposure and public exposure.
2. The advice of the radiation protection expert shall cover, but not be limited to, the following:

- (a) plans for new installations and the acceptance into service of new or modified radiation sources in relation to any engineering controls, design features, safety features and warning devices relevant to radiation protection;
- (b) the categorisation of controlled and supervised areas;
- (c) the classification of workers;
- (d) the content of workplace and individual monitoring programmes;
- (e) the appropriate radiation monitoring instrumentation to be used;
- (f) the appropriate methods of personal dosimetry;
- (g) the optimisation and establishment of appropriate dose constraints,
- (h) quality assurance;
- (i) the environmental monitoring programme;
- (j) radioactive waste disposal requirements;
- (k) the arrangements for prevention of accidents and incidents;
- (l) preparedness and response in emergency exposure situations;
- (m) training and retraining programmes for exposed workers.



## Requirements for the RPO EUTERP

- the RPO should:
  - supervise and take up the technical responsibility of the local management of radiation protection
  - must have the authority to do so
  - should ensure compliance with the arrangements as described in the radiation protection programme
  - will be advised by the RPE
  - must be sufficiently close to the work to be able to provide supervision and/or control



## Requirements for the RPO proposed BSS (art. 86)

1. Member States shall decide in which practices the designation of a radiation protection officer is necessary to perform radiation protection tasks within an undertaking.

Member States shall require undertakings to provide the radiation protection officers with the means necessary for them to carry out their duties.

The radiation protection officer shall report directly to the undertaking.



## Requirements for the RPO proposed BSS (art. 86)

2. Depending on the nature of the practice, the tasks of the radiation protection officer may include the following:
  - (a) ensuring that work with radiation is carried out in accordance with the requirements of any specified procedures or local rules;
  - (b) supervise implementation of the programme for workplace monitoring;
  - (c) maintaining adequate records of radioactive sources;
  - (d) carrying out periodic assessments of the condition of the relevant safety and warning systems;
  - (e) supervise implementation of the personal monitoring programme;
  - (f) supervise implementation of the health surveillance programme;
  - (g) providing new employees with an introduction to local rules and procedures;
  - (h) giving advice and comments on work plans;
  - (i) authorising work plans;
  - (j) providing reports to the local management;
  - (k) participating in the arrangements for prevention, preparedness and response for emergency exposure situations;
  - (l) liaising with the radiation protection expert.



## Requirements for recognition

### EUTERP / proposed BSS

- EUTERP:
  - recognition of the RPE is required
  - recognition of the RPO is not necessarily required
    - administrative burden on the employer, the regulatory authorities, the RPO's
  - eventual recognition of the RPO should be left to the individual member states
- proposed BSS:
  - recognition of the RPE is required (art. 4)
  - recognition of the RPO is not talked about



## Requirements for mutual recognition

### EUTERP

- requirement for mutual recognition (RPE/RPO?):
  - knowledge of the language (?)
  - knowledge of the national regulations (?)
    - restricted to the field of expertise and work area
  - pragmatic and flexible approach
    - not on a formal base
    - based on 'equivalence' of requirements
    - case by case



## Education and training of the RPE/RPO

### proposed BSS: art. 15-19

- art. 15:
  - Member States shall establish an adequate legislative and administrative framework for providing appropriate radiation protection education, training and information to all individuals whose tasks require specific competences in radiation protection. (.../...)
  - Member States shall establish education, training and retraining to allow the recognition of radiation of protection experts, medical physics experts, occupational health services, and dosimetry services.



## Education and training of the RPE/RPO

- education:
  - basic and broad academic, knowledge driven schooling of students
  - basic level of education for the RPE/RPO:
    - academic bachelor in science (physics, chemistry, engineering, ...)



## Education and training of the RPE/RPO

- training:
  - learning particular skills by professionals
  - elements of training:
    - theory
    - exercises
    - on-the-job training (OJT)
    - work experience
    - information and instruction
    - continuous professional development (CPD)
  - level of training:
    - postbachelor level
    - master level, no master degree



## Further advice of the BVS/ABR

- 1998: advice towards the legislator
  - distinguish between the radiation protection expert and the nuclear or radiological technological expert
  - separate educational and training requirements
- 2004: advice towards the Agency (FANC/AFCN)
  - qualified experts
    - overview of the existing educational and training programs in nuclear and radiological technology and in radiation protection in Belgium
    - accreditation requirements
- 2010: advice towards the Agency (FANC/AFCN)
  - qualified experts:
    - accreditation requirements
    - take into account the new concepts of RPE/RPO



## Current Belgian legislation

- organisation of radiation protection:
  - qualified expert: expert in physical surveillance
    - *deskundige bevoegd in de fysische controle*
    - *expert qualifié en contrôle physique*
    - definition: see annex 1 (BRD01, art. 2)
    - legal recognition: art. 73.2
  - service of physical surveillance in the Belgian legislation
    - *dienst voor fysische controle*
    - *service de contrôle physique*
    - tasks: see annex 2 (BRD01, art. 23)



## Current Belgian legislation

- organisation of radiation protection:
  - head of the service of physical surveillance
    - is the expert in physical surveillance (BRD01, art. 73.1)
    - tasks: see annex 2 (BRD01, art. 23)
      - these tasks equalise more or less the tasks of the RPO (art. 86 of the proposed BSS)
  - 'safety supervisor' or 'person appointed for surveillance'
    - *aangestelde voor bewaking*
    - *préposé à la surveillance*
    - definition and tasks: see annex 3 (BRD01, art. 30.4)
    - supposed to be the assistant of the head of the service of physical surveillance





## Consequences / Questions for the Belgian legislation

1. Is there an evolutionary way to adapt the Belgian legislation to the requirements of the proposed European BSS?
2. Is a revolutionary way necessary to adapt the Belgian legislation to the requirements of the proposed European BSS?
3. Is the Belgian expert in physical surveillance (deskundige bevoegd in de fysische controle / expert qualifié en contrôle physique) the RPO or the RPE of the proposed European BSS?
4. Is the Belgian 'safety supervisor' or 'person appointed for surveillance' (aangestelde voor bewaking / préposé à la surveillance) the RPO of the proposed European BSS?



## Consequences / Questions for the Belgian legislation

5. Is a legal recognition of the RPE/RPO/expert in physical surveillance/safety supervisor necessary?
6. What kind of education and training is required for the RPE/RPO/expert in physical surveillance/safety supervisor?
7. Is the RPE/RPO independent of the undertaking?
8. Is monitoring of compliance with the legislation by the authorities done by a RPE's/RPO's?
9. .../...



***– thank you for your attention –***

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