6th EUTERP Workshop
Legislative change in Europe

Qualification in radioprotection in Belgium in view of the new BSS-Directive (2013/59/ Euratom)

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Legislative change in Belgium

- IRRS 2013 – Action plan 2017
- Directive 2013/59/Euratom

→Vision for the future control and monitoring system

Radiation Safety (Health physic in Belgium)

Law of 15th april 1994 (→FANC Law)

Definitions :

- **General Regulation (royal decree)**: laying down the general regulations for the protection of the general public, workers and the environment against the hazards of ionising radiation
- **Recognised inspection organisations** : charged with certain tasks under the General Regulations
- **Health physics department (HPD)** : which is responsible for organising and supervising the measures required to ensure that the provisions of the said regulations are observed

Vision for the future control and monitoring system

- **Regulatory body :**

need to clarify the status and responsibilities of the "recognised inspection organisations"

  - **AFCN; BelV;**
  - **recognised inspection organisations,**
  - **HPD; RPE/RPO**
- **Be consistent with local needs and resources**
- **Clear separation between the responsibilities** of licensees/transporter and regulatory body
- Giving **more responsibility** to licensees/transporters
- **Every licensee/transport firm** must set up a **health physics department**
- Application of the **graded approach** principle

Schema for high risk facilities

Classe I : NPP, research reactor**;**
Classe IIA :cyclotron, HASS >100 TBq,…

Class I facilities :

- licensees allocate **internal** resources to manage all **safety and radiation protection functions**
- licensee shall **at all times** have at its disposal a minimum of one qualified Health Physics Expert , head of the health physics department.

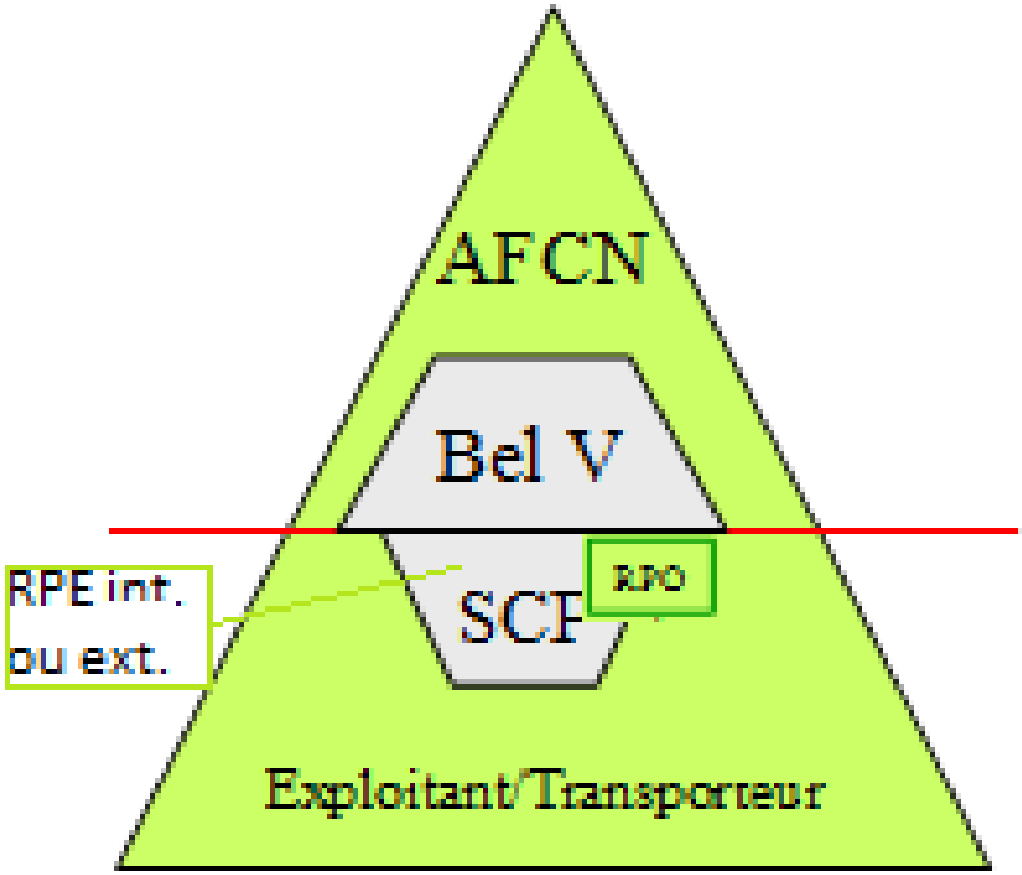
Classe IIA facilities:

- by delegation of the Agency**, Bel V** shall inspect Class IIA facilities, regardless of whether licensees have an internal expert or call in a health physics organisation.

Schema for high risk facilities

Classe I : NPP, research reactor**;**

Classe IIA : radionuclide production, HASS > 100 TBq,…



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Schema for other facilities
Class II , Class III and Transport firms

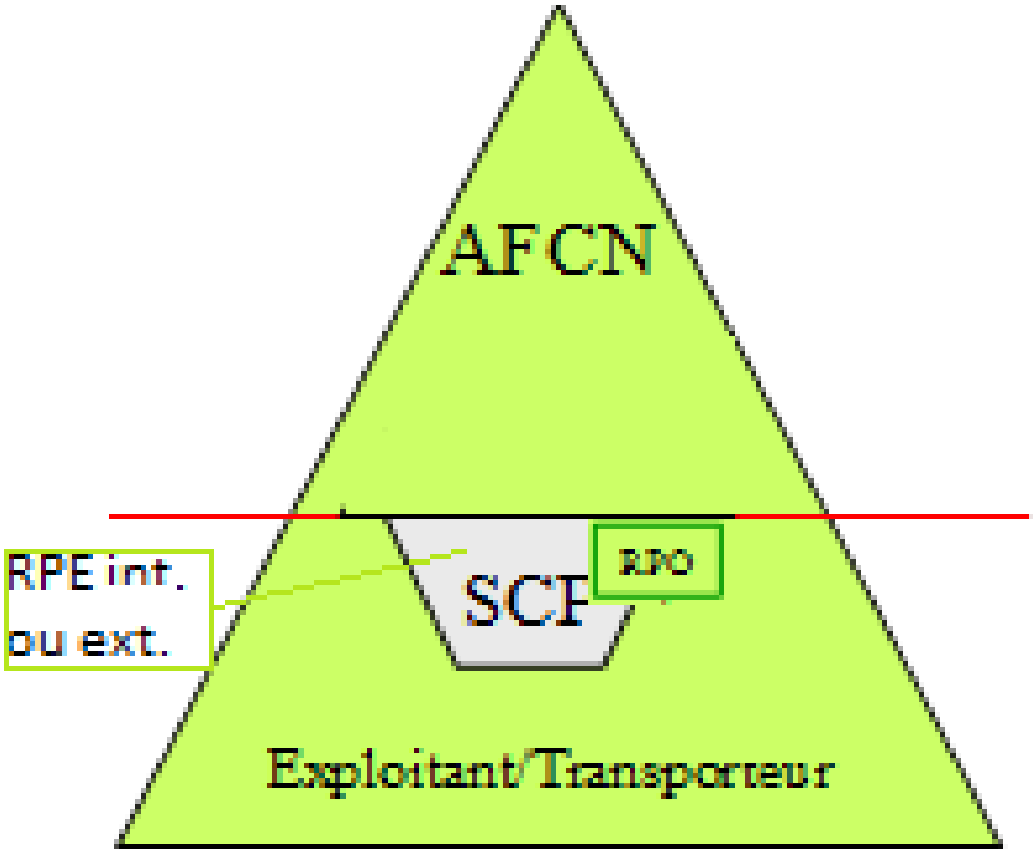
Class II and III facilities :

- ***licensee/transport firm must set up a health physics department***
- in a graded approach***, the complexity of the HPD's functions*** decreases with the level of risk

Transport firms :

- the supervision of transporters and other envisaged organisations shall be similar to that envisaged for Class II or III facilities

Schema for others facilities
Classe II and III/Transport firms



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Change in Belgium

Existing system :

- The role and tasks of the **qualified health physics expert**
- Formation requirements of the qualified health physics expert
- Recognition of the qualified health physics expert
  - The role and tasks of the **qualified health physics expert** is completely separated of the role and task of MPE
  - Recognition of **qualified health physics expert** and MPE are completely separated

- The role and tasks of "**surveillance officer**"
- No agreement or recognition

- RPE/surveillance officer /MPE may be the same person (small facilities)

Change in Belgium

Outlines for future system :

- The role and the task of the "Shared HPD"
- The role and tasks of the **qualified health physics expert**
- The role and tasks of the **qualified health physics expert** must be completely separated of the role and task of MPE
- Formation requirements of the qualified health physics expert
- Recognition of the qualified health physics expert
- Recognition of **qualified health physics expert** and MPE must be completely separated
- Recognition of an organization

- The role and tasks of "surveillance officer→**RPO**"
- Formation requirements of **Radioprotection Officer**
- No agreement or recognition

- RPE/RPO/MPE may be the same person(small facilities)

Relations with undertaking

- licensee/transport firm must set up a **health physics department** (graded approach with level of risk)

  →Approval of the Radiation Protection Organisation by licensing process

- the advice provided by the qualified health physics expert have to be written and controllable (consultation in quality insurance program undertaking)
- external expert may be used
- the qualified health physics expert can be independent or can be employed by the undertaking

Recognition in health physics

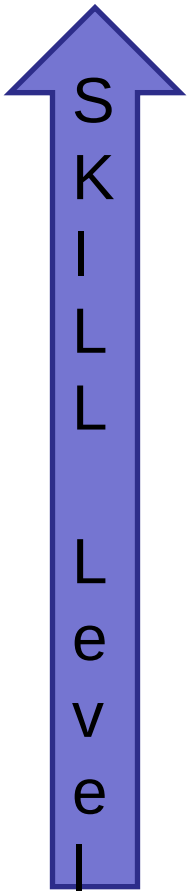
- Graded approach in recognition must be applied in term of sectors :
  - Class of facilities (I,IIA,II, III)→3 levels
    - NPP, Research reactors, Waste
    - Industrial applications: Cyclotrons, RX>200kV, HASS, Sources, …
    - Medical applications: Production of radio pharmaceutics , radiotherapy, nuclear medicine, radiodiagnostic, LSD
  - Transport firms→ (T1,T2) 2 levels
- Recognition of expert and organization

RPO

- basic training requirement
- competences and practical experience specific for different types of practices
- must be employed by undertaking
- No recognition

Criteria for minimum training and expertise of Radiation Protection Experts (RPE) and Radiation Protection Officers(RPO)

Parties involved in Belgium	***Parties involved - BSS***	***Functions***
Health Physics Expert		• Risk and accident prevention • Organisation and supervision of measures necessary for radiation protection (except for medical examination) of workers, the public and the environment
	RPE	• To advise on radiation protection in order to guarantee effective protection of people
	RPO	• To supervise radiation protection locally on an everyday basis • To report to the licensee • To liaise with the RPE
Surveillance officer per controlled area/transport		• To ensure compliance with safety measures and correct operation of protective equipment • To take emergency protective action



Criteria for minimum training and expertise of Radiation Protection Experts (RPE) and Radiation Protection Officers(RPO)

	RPO	Health physics expert
Duties in National legislation	No → Practices/ facilities	yes
Recognised by competent authority	no	yes Validity (3y first time- 6 y)
Basic training	yes	yes
Training & development activities	yes	yes
Operational experience	yes	yes
Mentoring	no	yes

Health physics expert

	In force	Amendment expected
Pre-requisites		
Recognised Health Physics Expert Class I	MSc in pure or applied sciences and	X
Recognised Health Physics Expert Class IIA	MSc in pure or applied sciences	X
Recognised Health Physics Expert other classes	MSc in pure or applied sciences	X
Recognised Health Physics Expert Transport T1	X	MSc in pure or applied sciences
Recognised Health Physics Expert Transport T2	X	MSc in pure or applied sciences
Recognised Health Physics Expert Class I	They must have sufficient experience in the field of nuclear science and radiation protection. Opinion of the Scientific Council (experience)	
Recognised Health Physics Expert Class IIA and other classes	They must have sufficient experience in the field of nuclear science and radiation protection. Opinion of FANC Jury (experience)	

Health physics expert

	In force	Amendment expected
Basic training		
Radiation protection	12 ECTS	12 ECTS
	National legislation	
Radiological risk management		Risk management (Advising on prevention)
Quality assurance		Basic knowledge
Options		
Nuclear technology and safety		Class I facilities – nuclear reactors 30 ECTS
		Class I facilities – other than nuclear reactors 20 ECTS
		Class IIA installation – accelerators (radionuclide production) 10 ECTS
		Class II other and Class III installations
		Transport 2 ECTS
Continuous Professional Development		
	They shall be able to demonstrate that they are maintaining and developing their knowledge	

Needs for implementation

- Basic training of RPO

- Update in training quality assurance for RPE
- Training /methods in buildings material measurment
- Training in medical applications
- Training in transport

Thank you for your attention

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