



Introduction of RPE/RPO requirements in the French regulation

First outlines





- **Where we are (the existing system) ?**
 - *The role and the task of the “ Personne Compétente en Radioprotection”*
 - *The role and the task of the “approved body for technical control”*
- **Where we would like to go (outlines for the future system) ?**
 - *The role and the task of the “Collective skill” in BNI*
 - *The role and the task of the “Personne Compétente en Radioprotection”*
 - *The role and the task of the “approved body for advisory and control”*
- **Key points before starting discussions with “stakeholders”**

The role and the task of the “ *Personne Compétente en Radioprotection*”
(PCR = BSS 96/29 Qualified expert), for all practices



On the basis of the Labour code (occupational exposure), the PCR, appointed by the employer and under his responsibilities :

- “Participates” in the training and retraining of workers, preparation and implementation (*RPE/RPO*)
- “Participates” in the preparation of the documentation needed for the registration or the licence
- “Carry out” the preliminary risk assessment of workers (to be done before the delineation of the controlled areas)
- “Carry out” the assessment of exposure at workplaces (*RPO*), before the classification of workers by the physician
- “Gives” advice on the delineation of the controlled areas (*RPE*)
- “Defines” the protection equipment needed (*RPE*) and “checks” their efficiency (*RPO*)



Where we are ? - The existing system

The role and the task of the “ *Personne Compétente en Radioprotection*”
(PCR = BSS 96/29 Qualified expert), for all practices



On the basis of the Labour code (occupational exposure), the PCR, appointed by the employer and under his responsibilities :

- “**Identifies**” situations where exceptional doses are likely to be received, and “**defines**” associated dose constraint (**RPE**)
- In case of intervention of outside workers, he is “**associated**” to the definition and the implementation of the coordination of preventive measures
- May “**implement**” the technical control of sources and generators, of the protection, alarm and measurements equipments (**RPO**)
- “**Ensures**” the management of the surveillance of the worker exposures (**RPE/RPO**) and “**sends**” the results of the operational dosimetric surveillance to SISERI (national dosimetry registry)

Number of PCR : unknown (around 10,000)

Possibility of outside PCR, opened by limited practices under registration : i.e. use of X ray generator, except for interventional radiology



Where we are ? - The existing system

*The (re)training of the “ **Personne Compétente en Radioprotection**”
on the basis of the an existing graded approach (3 PCR training levels)*

➤ **Level 1** : 24h

- For practices : under registration procedure (X Ray generators except for interventional radiology), using radioactive sealed sources (IAEA, cat 5),
- For transport of excepted packages,
- For radon exposure in workplaces (if needed) and flight crew

➡ *3 sectors : medical, industry and transport*

➤ **Level 2** : from 45 up to 70 hours, depending of the options

- Option 1 : radioactive sealed sources, accelerators and X Ray generators (CT, interventional radiology,)
- Option 2 : radioactive unsealed sources (nuclear medicine, research laboratory, ...)

➡ *3 sectors : medical, industry and transport*

➤ **Level 3** : 90 hours for Basic Nuclear Installations (BNI)

➡ *2 sectors : - Nuclear Power Plants
- Others (Research Reactors, Radioactive Waste Factories)*



Where we are ? - The existing system

*The (re)training of the “ **Personne Compétente en Radioprotection**”
on the basis of the **graded approach (3 PCR training levels)***

- The initial education : High School diploma (minima)
- The training is provided by a certified training body **by a organism certified by an accreditation body**
- Retraining every 5 years
- A **certificate** is delivered by the certified training body, after an exam (written and oral)



Where we are ? - The existing system

*The role and the task of the “**approved body for technical control**”*

(no link with BSS 96/29, for all practices)



On the basis of the Labour code (occupational exposure) and the Public Health code (public exposure), the approved body (by ASN) for technical control :

- “**May carry out**” **inside technical control** (possibility for the employer of out sourcing) in relation to occupational exposure (measurements of dose rate, workplace monitoring, surface contamination...)
- “**Carry out**”, in addition of inside technical control, the **outside technical control** intended to confirm periodically the results of internal control (mandatory); (RPO)
- “**Assesses**” the efficiency of the **organisation of RP for public exposure**,(RPE)

Number of approved bodies by ASN : 42

Training of the staff : specific requirements based on initial training and/or job experience (international standard) and retraining



Where we would like to go ?

Basic outlines

1st outline : continuation of the application of the graded approach

Defining relevant requirements for the application of Art. 34 and 62 of Euratom BSS for different types of practices, considering the nature of the equipment (radioactive sources or X Ray generators, sealed or unsealed sources) and the impact (release or not of radioactive substances towards the environment, risks for workers and the public)

2nd outline : on the basis of the graded approach,

defining 2 systems :

- one for Nuclear Basic Installation,
- another one for other practices

Where we would like to go ?

*The role and the task of the “**Collective skill**” in BNI*

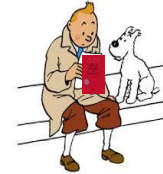
3rd Outline (BNI only) : Organisation based on a « **Collective skill** »

Group of RPE, within the Radiation Protection Department

- Definition of the level of initial training for the BNI Expert (RPE) (see ENETRAP guidance), on the basis of BSS, Art. 82
- For each installation, recognition by ASN approval of the “management system of RP”, including human resources (RPE), training, ...



4th Outline (all practices excepted BNI)



- **The basis of the existing system and the terminology PCR should have to be maintained**, avoiding the demotivation of "inside PCR" (*it is not a full time job, it is a mission in addition of the job*)
- Difficult to separate the advisory tasks (RPE) from the operational tasks (RPO) ... ➡ **Maintain the PCR system** (a mix of RPE/RPO), but update the definition of tasks (introducing RPE advisory tasks and maintaining the operational tasks)
- The tasks and the training of the PCR do not cover public exposure and preparedness to emergency ➡ **Complement the tasks and the existing training courses of PCR** (for existing levels PCR 2 and 3), considering Art. 82 (BSS)

5th outline :

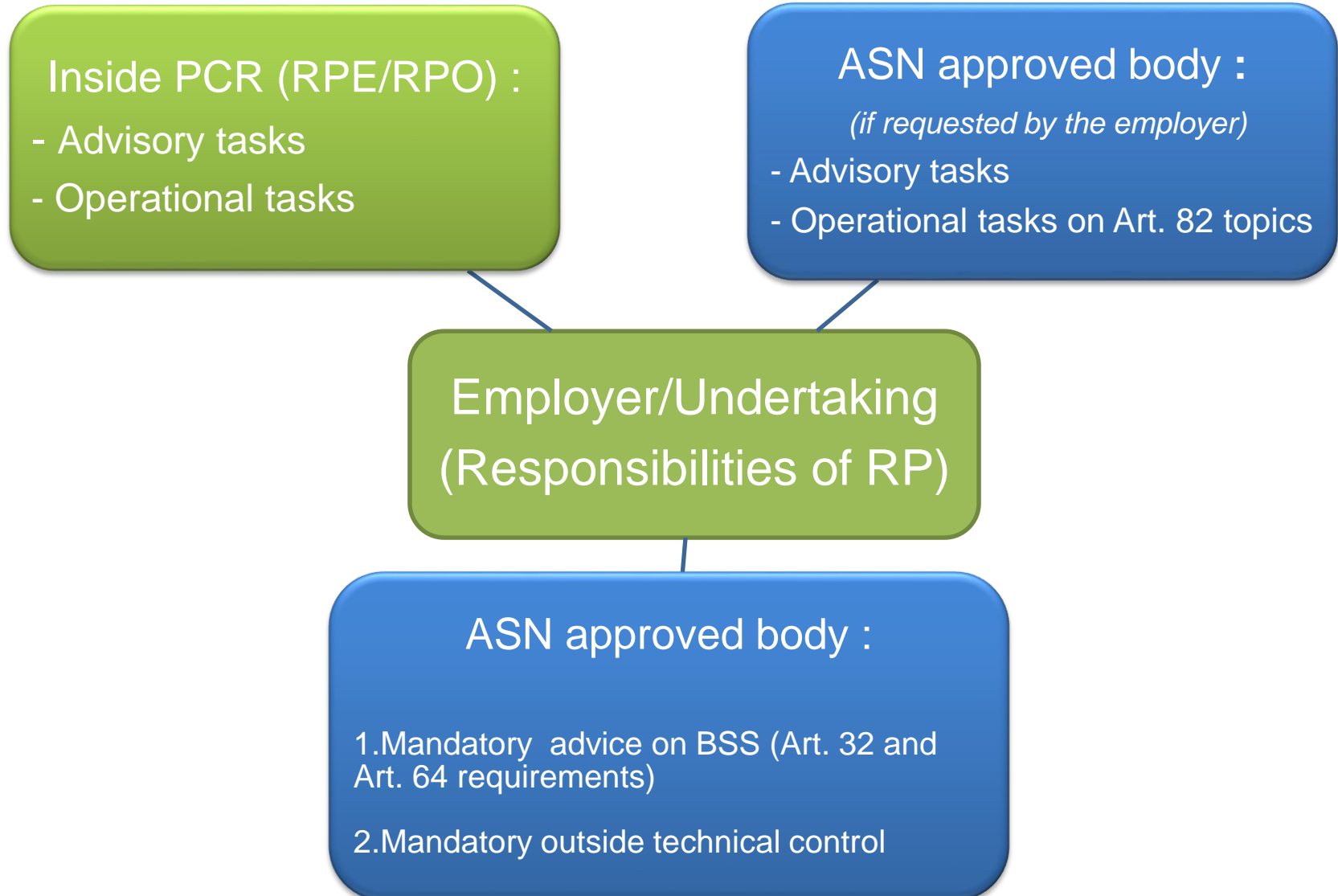
- The tasks of the “approved body for technical control” have to be reviewed, on the basis of the following orientations:

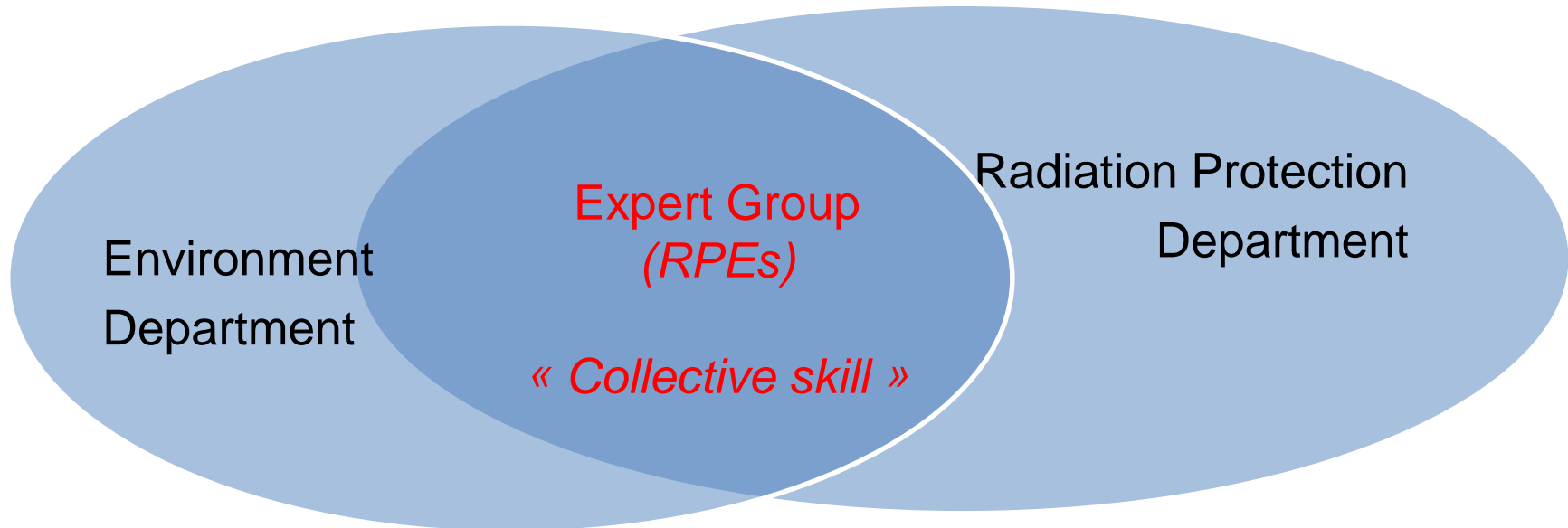


- **Introducing advisory task** on Radiation Protection issues (both occupational and public exposures), if requested by the employer, for all topics covered by Art. 82 (BSS) ;
 - For specific topics covered by Art. 34 and 68 (BSS), the **consultation** of the approved body **should be mandatory, except for BNI** ;
- **Maintaining outside technical control**, but frequencies should have to be revised (graded approach).



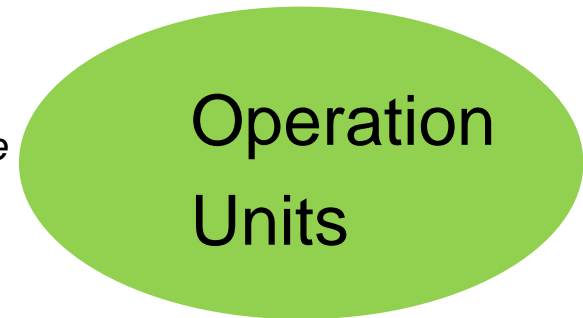
- The management of human resources employed by the approved body should have to be reinforced





Specific requirements :

- *Quality insurance* covering the activities of department(s) in charge of RP, including the management of human resources and the Expert Group (competences, training and retraining)
- *Competence of Experts(RPE)* covering Art. 82 topics
- *Mandatory advice Art. 32 and 68 requirements by the Group of Experts*
- *Approval of the RP organisation by ASN (case by case)*



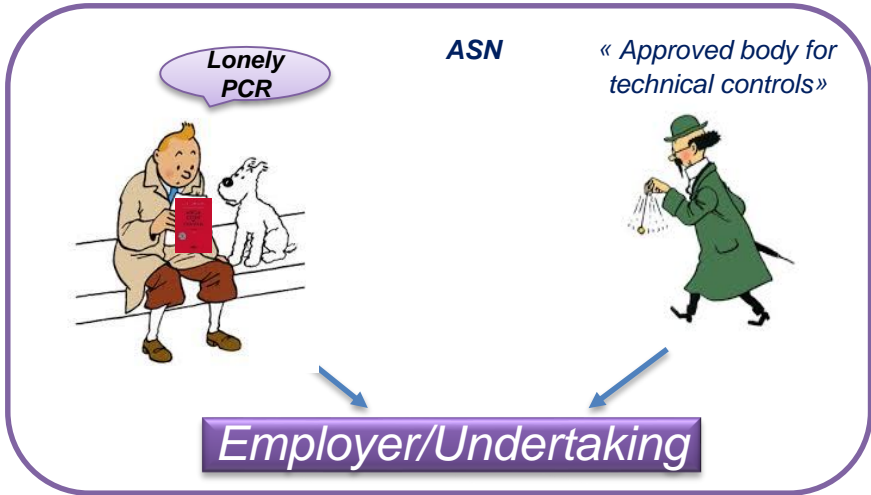


Where we would like to go ?

What's about the RPE recognition system ?

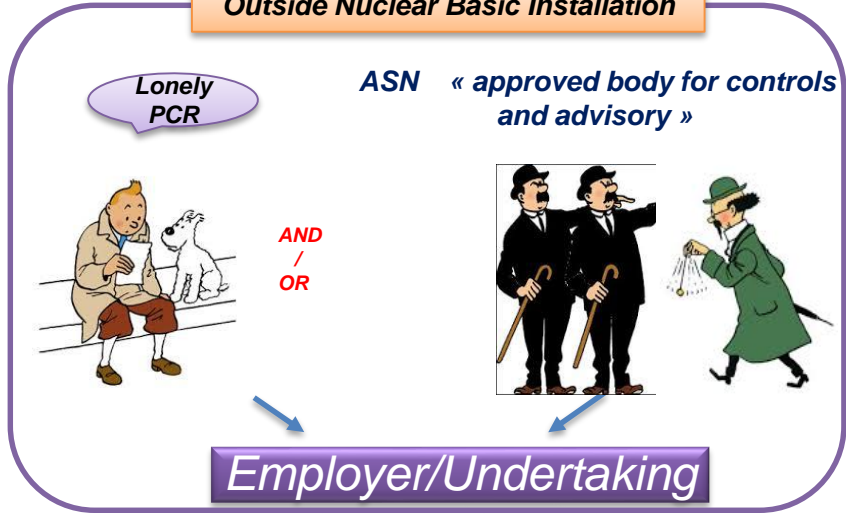
	Inside PCR (RPE/RPO)	Outside Approved Body (RPE/RPO)	Expert Group (RPE)
Scope	All practices, excepted BNI but including "Prestataire"	All practices, excepted BNI	BNI
Recognition	Individual certificate delivered by an certified training body	Initial training or individual experience (certificate delivered by an certified training body) as defined by national /international standard	
ASN approval		ASN approval, integrating the management of Human Resources	ASN approval of the Radiation Protection Organisation, including the management of Human Resources (Expert Group)

Where we are



Where we would like to go ?

Outside Nuclear Basic Installation



Basic Nuclear Installation





Key Points before starting discussions with “stakeholders”

- The internal PCR (except for BNI) should be a mix of RPE and RPO
- Level for initial PCR education ? High school diploma and individual experience
- Level for RPE ? To be defined
- The training of PCR (level 2) should have to be completed by courses on public exposure
- The advices required by art 32 and 68 should be mandatory, and
 - Delivered by an Outside approved Body in the case of practices others than BNI
 - Delivered by an Inside Expert in the case of BNI
- A new procedure for BNI : ASN Approval of the Radiation Protection Organisation, including the management of Human Resources (Expert Group)

Thank you for your attention

A poor lonesome RPE ?

