

HERCA Task Force on Education and Training on Radiation Protection

Articulation between the BSS requirements related to
RPE/RPO

Article 34 Consultations with a radiation protection expert (1)

Member States shall require undertakings **to seek advice from a radiation protection expert** within their areas of competence as outlined in Article 82, on the issues below that are relevant to the practice:

- a) the examination and testing of protective devices and measuring instruments
- b) prior critical review of plans for installations from the point of view of radiation protection;
- c) the acceptance into service of new or modified radiation sources from the point of view of radiation protection;
- d) regular checking of the effectiveness of protective devices and techniques;
- e) regular calibration of measuring instruments and regular checking that they are serviceable and correctly used.

Common understanding:

- For occupational exposures, the advice from a RPE is mandatory on the issues (a), (b), (c), (d), (e)
- The consultation of RPE is placed under the responsibility of the undertaking
- The RPE can be an employee from the undertaking or an outside expert (see also art 82)
- **Issues relevant to the practice :**
 - **a, b and c : suitable for all practices at the time of the prior authorisation**
 - **d and e : frequency of advices depends of the nature of the practice (and the risk)**
- Advice from an independent expert, independency from the employer ? What independent means ?
 - **RPE can work in the facility but independent from the hierarchy**
 - Case of small facilities : high level of competence missing : -> external expert (paid by the undertaking).

Article 34 Consultations with a radiation protection expert (1)

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- b) prior critical review of plans for installations from the point of view of radiation protection;
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- d) regular checking of the effectiveness of protective devices and techniques;
- e) regular calibration of measuring instruments and regular checking that they are serviceable and correctly used.

Common understanding:

- **Differences between the task mentioned in article 34 (specific points) / 82**
 - Specific requirements for article 34 -> responsibility of undertaking on specific circumstances in the life of the facility (licensing new type of facility, new operator, changes, different moments of the facility, review assessment of the facility, ...)
 - 82 : from day to day task of RPE.

Article 34 Consultations with a radiation protection expert (2)

Member States shall require undertakings **to seek advice from a radiation protection expert** within their areas of competence as outlined in Article 82, on the issues below that are relevant to the practice:

- a) the examination and testing of protective devices and measuring instruments
- b) prior critical review of plans for installations from the point of view of radiation protection;
- c) the acceptance into service of new or modified radiation sources from the point of view of radiation protection;
- d) regular checking of the effectiveness of protective devices and techniques;
- e) regular calibration of measuring instruments and regular checking that they are serviceable and correctly used.

Comments / Recommendation:

- **The frequency of the RPE advice** depends of the practice, considering the nature of the equipment (radioactive sources or X Ray generators, sealed or unsealed sources) and the magnitude of potential exposures for workers (graded approach).
- The advices provided by RPE on the relevant issues have to be written and controllable ; it is recommended to include the process of consultation in the quality insurance system -> **traceability is relevant in case of authorization (part of the process) ; prior authorization, review assessment, modification**
- It should be recommended to the undertakings to present the result of the consultations of RPE to the internal committee in charge of Health, Hygiene and Security.

Article 68 Tasks for the undertaking

Member States shall require the undertaking to carry out the following tasks:

- a) achieve and **maintain an optimal level of protection of members of the public** : is it relevant for all practices (radiology -> calculate the shield,) ? **Yes**
- b) accept into service adequate equipment and procedures for measuring and assessing exposure of members of the public and radioactive contamination of the environment;
- c) check the effectiveness and maintenance of equipment as referred to in point (b) and ensure the regular calibration of measuring instruments;
- d) seek advice from a radiation protection expert in the performance of the tasks referred to in points (a), (b) and (c).

Common understanding (idem art 32):

- For **public** exposures, the advice from a RPE is mandatory on the issues (a), (b) and (c)
- The consultation of RPE is placed under the responsibility of the undertaking
- The RPE can be an employed from the undertaking or an outside expert

Comments / Recommendation (idem art 32):

- **The frequency of the RPE advice** depends of the practice, considering the nature of the equipment (radioactive sources or X Ray generators, sealed or unsealed sources) and the magnitude of potential exposures for the public (graded approach).
- The advices provided by RPE on the relevant issues have to be written and controllable ; it is recommended to include the process of consultation in the quality insurance system.
- **Optimization : the knowledge of RPE can help the undertaking to achieve optimization (the undertaking has to implement a process)**

Article 82 Radiation protection expert (2)

1. Member State shall ensure that the radiation protection expert gives competent advice to the undertaking on matters relating to compliance with applicable legal requirements, in respect of occupational and public exposure.
2. The advice of the radiation protection expert shall cover, where relevant, but not be limited to, the following: (a) (b) (c) (d) ...(m) (n) (o)

Comments / Recommendation :

- It should be recommended **at national level**, to classify the relevant issues, considering the nature of the equipment (radioactive sources or X Ray generators, sealed or unsealed sources) and the magnitude of potential exposures for the workers and the public (graded approach)...
- The training and retraining process of RPE should have to take into account the list of topics (a, b, c, ...)
- In addition with the advices requested by article 32 and 68, the other advices provided by RPE on the relevant issues have to be written and controllable ; it is recommended to include the process of consultation in the quality insurance system.
- It should be recommended to the undertakings to present the result of the consultations of RPE to the internal committee in charge of Health, Hygiene and Security.
- **Some Guidance on training are needed : arrangements for prevention of accidents and incidents), preparedness and response in emergency exposure situations, preparation of appropriate documentation such as prior risk assessments and written procedures , quality assurance**

Article 82 RPE and MPE

3. The radiation protection expert shall, where appropriate, **liaise with the medical physics expert.**

Common understanding:

- This requirement is relevant for the optimization of occupational exposure and medical exposure in interventional radiology

Comments/recommendation :

- ~~Practically, it could be recommended to the undertaking to appoint a MPE (or more) to also be a RPE, because of their high level of knowledge in the field of radiation physics -> no consensus on that topic.~~ It is an issue of qualification, the same person may be MPE and RPE ? competences are different ? The protection of patient and protection of worker or public may have opposite goals. All exposure may be integrated in a optimisation process.

Delete this recommendation.

Article 82 Other tasks for RPE

4. The **radiation protection expert** may be assigned, if provided for in national legislation, the tasks of radiation protection of workers and members of the public.

Common understanding:

- This requirement confirms the fact that RPE can be an employee from the undertaking, in charge of Radiation protection works
- He can also be a RPO (see art 84)

Comments:

- It should be defined which of the RPE tasks can be performed by an RPE employed by the undertaking and which need an RPE in an independent status.
- **Is there a conflict when the RPE gives an advice on a RPO task ? The regulator must define the responsibilities of each. The authority body as an important role**

Definition of RPO (article 4 (74))

Article 4 (74) "**radiation protection officer**" means an individual who is technically competent in radiation protection matters relevant for a given type of practice to supervise or perform the implementation of the radiation protection arrangements

Article 84 Radiation Protection Officer (1)

1. Member States shall decide in which practices the designation of a radiation protection officer is necessary to supervise or 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 tasks. The radiation protection officer shall report directly to the undertaking. Member States may require employers of outside workers to designate a radiation protection officer as necessary to supervise or perform relevant radiation protection tasks as they relate to the protection of their workers.
2. Depending on the nature of the practice, the tasks of the radiation protection officer in assisting the undertaking, 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 all radiation sources;
 - d) carrying out periodic assessments of the condition of the relevant safety and warning systems;
 - e) supervise implementation of the health surveillance programme;
 - f) providing new workers with an appropriate introduction to local rules and procedures;
 - g) giving advice and comments on work plans;
 - h) establishing work plans;
 - i) providing reports to the local management;
 - j) participating in the arrangements for prevention, preparedness and response for emergency exposure situations;
 - k) information and training of exposed workers;

Article 84 Radiation protection officer (2)

Common understanding:

- The RPO can either supervise or perform the implementation of the radiation protection arrangements himself (see art 84)
- The designation of RPO is not a mandatory requirement (flexibility)
- The competence fields for RPO are clearly identified and depends of the practice.
- **No issue for common understanding**

Comments/recommendation :

- For which practises the designation of a RPO might be necessary, How many different specialisations of RPO can be recognized?
- Harmonisation of learning outcomes is necessary to enable European exchange of RPO's
- **Need guidance for RPO training ? Basic training ? Basic education and training for RPO should be developed by ENETRAP**

Article 79 Recognition of services and experts

1. Member States shall ensure that arrangements are in place for the recognition of: (c) radiation protection experts;
2. Member States shall specify the recognition requirements and communicate them to the Commission.

Common understanding:

- Provisions are needed in national legislation/regulation to define a recognition system dedicated to RPE and, if appropriate, to RPO.
- The choice of the recognition system is under the responsibility of MS, the BSS directive does not state minimal requirements on this point
- **The BSS open the possibility to implement recognition system based on individuals or services / bodies or collective skill. Group of people or group of RPE ? (at least one RPE)**

Article 79 Recognition of services and experts (Cont.)

Comments / Recommendation:

- The recognition system can be different according to the nature of the practice and the corresponding stakes, and to the staff and competence needed for radiation protection issues (“a nuclear power plant is not a X-Ray generator”) : **ENETRAP guidance may be useful for recognition of Services/bodies**

Comments:

- In order to facilitate recognition of RPE by Member States and based on ENETRAP guidance it should be helpful to come to consensus on the following items:
 - Type of academic disciplines suitable for educational requirements for RPE
 - Minimal requirements needed in the field of specific radiation protection training of RPE
 - Minimal requirements for professional experience needed for RPE (this might imply definition of minimal criteria depending on the nature of practice)
 - How to demonstrate knowledge of the country-specific legislation.