



**ORTISEI – URTIJEI**  
**15 – 19 novembre 2015**  
Hotel Adler  
**XII FORUM ITALIANO DI**  
**RADIOPROTEZIONE**

**Introduzione al recepimento nella legislazione  
italiana della  
direttiva 59/2013 Euratom**

# **La figura dell'Esperto qualificato nell'Unione Europea e negli altri Continenti**

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## IAEA Radiation Protection and Safety of Radiation

### Sources: International Basic Safety Standards

#### General Safety Requirements Part 3 No. GSR Part 3, 2014

**Qualified Expert (Radiation Safety Officer in USA):** An individual who, by virtue of certification by appropriate boards or societies, professional licence or academic qualifications and experience, **is duly recognized as having expertise in a relevant field of specialization**, e.g. medical physics, radiation protection, occupational health, fire safety, quality management or any relevant engineering or safety specialty.

**Radiation Protection Officer:** A person technically competent in radiation protection matters relevant **for a given type of practice** who is designated by the registrant, licensee or employer to oversee the application of regulatory requirements.



European Commission: Council Directive  
2013/59/Euratom of 5 December 2013

Testo in inglese

- (73) "radiation protection expert"** means an individual or, if provided for in the national legislation, a group of individuals having the knowledge, training and experience needed to give radiation protection advice in order to ensure the effective protection of individuals, and whose competence in this respect is recognised by the competent authority;
- (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;



**European Commission: Council Directive  
2013/59/Euratom of 5 December 2013**

Testo in italiano

- (73) “esperto in radioprotezione“: la persona o, se previsto dalla legislazione nazionale, il gruppo di persone che possiede le cognizioni, la formazione e l’esperienza necessarie a esprimere pareri in materia di radioprotezione al fine di garantire un’efficace protezione delle persone e la cui competenza al riguardo è riconosciuta dall’autorità competente;**
- (74) “addetto incaricato della radioprotezione“: una persona tecnicamente competente nelle questioni di radioprotezione specifiche per un determinato tipo di pratica per procedere o sovrintendere all’attuazione delle disposizioni in materia di radioprotezione;**



## IRPA Definition of Radiation Protection Expert (RPE)

(1)

**The IRPA Executive Council (2004-08) proposed the registration of the Radiation Protection Expert (RPE), which International Labour Organization (ILO) has included in the actual International Standard Classification of Occupations ISCO-08 within a new Unit Group in which the RPE is given as an example of registered occupations:**

**ISCO-08; Unit Group 2263:**

**Environmental and occupational health and hygiene professionals**



## IRPA Definition of Radiation Protection Expert (RPE) (2)

**ISCO-08; Unit Group 2263: Environmental and occupational health and hygiene professionals**

**Environmental and occupational health and hygiene professionals assess, plan and implement programs to recognize, monitor and control environmental factors that can potentially affect human health, to ensure safe and healthy working conditions, and to prevent disease or injury caused by chemical, physical, radiological and biological agents or ergonomic factors.**



## IRPA Definition of Radiation Protection Expert (RPE) (3)

**(A) “Radiation Protection Expert (RPE)”** is a person:

- **having education and/or experience equivalent to a graduate or masters degree** from an accredited college or university in radiation protection, radiation safety, biology, chemistry, engineering, physics or a closely related physical or biological science; and
- **who has acquired competence in radiation protection, by virtue of special studies, training and practical experience.** Such special studies and training must have been sufficient in the above sciences to provide the understanding, ability and competency to:



## IRPA Definition of Radiation Protection Expert (RPE) (4)

- anticipate and recognize the interactions of radiation with matter and to understand the effects of radiation on people, animals and the environment;
- evaluate, on the basis of training and experience and with the aid of quantitative measurement techniques, the magnitude of radiological factors in terms of their ability to impair human health and well-being and damage to the environment;
- develop and implement, on the basis of training and experience, methods to prevent, eliminate, control, or reduce radiation exposure to workers, patients, the public and the environment.





## IRPA Definition of Radiation Protection Officer (RPO)

Both the IAEA and EU BSS also require the appointment of a **Radiation Protection Officer (RPO)**, who is technically competent in radiation protection matters to oversee, supervise or perform the implementation of the radiation protection arrangements. **This role is essentially focused on more day-to-day supervision and control of work with radiation, and is not generally regarded as a full professional-level appointment,** requiring less expertise and experience, in general at a more hands-on level. The BSS do not require any formal scheme for the recognition of competence for this role, although of course this is an option for national authorities or indeed for professional bodies to pursue if they so choose.



## Austria

Dear Giorgo,

thank you for your mail. Regarding the RPE in Austria we have only a single figure. This must be certified, but can be a single person (like me) or an institution (like Seibersdorf). There is no restriction of the power of sources or X-ray machines. The RPE must be certified for all. I hope this answers your question, but don't hesitate to contact me if you wish more details. Have a nice weekend and greetings from Vienna

Alfred

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Univ.-Lektor Dr. Alfred HEFNER, QE Consultant, Radiation Protection  
Expert Radiation Safety and Applications Seibersdorf Labor GmbH 2444  
Seibersdorf, Austria



**U.K.**

**Dear Giorgio, at present we have two pieces of legislation –Ionising Radiations Regulations 1999 (IRR99) and Ionising Radiations (Medical Exposure) Regulations 1999 (IRMER2000). The IRR99 requires the employer to appoint a Radiation Protection Adviser.**

**In IRMER2000 the employer is required to have a Medical Physics Expert to be involved in all medical exposures – Regulation 9.**

**To answer your question – a suitably qualified RPA should be appointed depending on the sources of ionising radiation and this could be for the industrial sector or the medical sector. A suitably qualified MPE is appointed/employed to advise on patient doses etc in the medical sector where exposures involve patients.**



## **Francia**

**Dear Mr Cucchi,**

**in France, the degree of Radiation Protection Competent Person is different for medical and industrial field but there is a common part.**

**There is also options like sealed sources, non sealed sources.**

**A new decree has been published in 2013 December but it continues to differentiate both sectors.**

**Best regards**



## Germania

**Dear Dr. Cucchi,  
thank You for Your question. The definition of the German RPE/RPO is most complicatet. By now we have no defined RPE or RPO. In Germany we have Sachverständige, like organisation as the TÜV who might play the role of RPE. These organisation might work in the technical and medical field alike. On the other hand we have Strahlenschutzbeauftragte (SSB) who might figure as RPO. Here we habe about 30 different qualifications in the technical field and about 10 in the medical field.**

**Best Regards**

**Karl-Ludwig Stange**

**Sekretär des Arbeitskreises Ausbildung des Fachverbands Strahlenschutz  
(AKA)**



## Norvegia

I may give you the following list for the number of RPO's in licensed facilities, i.e in undertakings which require a license from the NRPA.

For that reasons, smaller facilities like dental X-ray, chiropractics, industrial gauges etc will not be included.

Medical use /Diagnostics and therapy :	48 RPOs
Industrial radiography:	80
Off shore logging	13
Research facilities	40
Tracer companies	6

Hope this information will be useful.

Best regards



## **Belgio**

**Dear M Cucchi,**

**in Belgium, we have 2 level of qualified expert, regarding to the potential risks of the installations. The "level 1" is dedicated to very large devices like nuclear power plant and the "level 2" is for all the others, including industrial or medical. But each expert have to be authorised by a royal decree and the authorization is restricted to some kind of source or ionising device for which he can prove his awardness. It means that if you want to be the qualified expert of an hospital, you have to prove your knowledge of the different devices and you will only receive, for a period of 5 years, a document saying that you are qualified expert for a certain type of devices in a certain place (hospital or group of hospital)I hope that it can help you**

**Best regards,**

**Isabelle Gerardy**



# Australia

**Hi Giorgio**

**Our regulatory bodies do not distinguish between medical or industrial.**

**Also, at present, our certification process for radiation safety professionals is comprehensive.**

**Hope this answers your question.**





## India

**Hello Giorgio,**

**It is nice to hear from you.**

**In the Indian legislation, RSOs are designated according to the potential hazard of the sources used for example RSO level I, RSO Level II and RSO level III.**

**The medical and industrial applications are considered the same, but the power of sources different.**

**Best Regards,**



**Cina**

Dear Prof. Giorgio,

The certification is not according to the power of the sources, generally, it works in related fields, not special only for medical or only for industrial field.

Please feel free to contact me in case of necessary.

Best regards!

Qiuju Guo

School of Physics Peking University



## Canada

**Hi Giorgio,**

**Ok. In North America the acronym normally is RSO (Radiation Safety Officer).**

**RSO's are certified by the by the Regulator for the particular licensed activity. It usually involves an oral exam.**

**We just relicensed our facility after a number of years without a licence.**

**Regards**



**Kenya**

**Hi Prof**

**Hope you are good**

**Kenyas' legislation is only single RSO for both Medical and industrial Radiation**

**Regards**

**Amos Belio Simotwo**

**Radiographer/Sonographer**

**Kenyatta National and Referral Hospital**



**Iraq**

**Dear Giorgio,  
Greetings**

**In Iraq there is a single Authority responsible for authorizing radioactive sealed sources and medical sources, which is IRSRA (Iraqi Radioactive Sources Regulatory Authority).**

**The activity of which covering the different applications , no matter of medical or industrial.**

**The same will apply for the radiation protection officer.**

**Best regards**

**Hussein Ali ABBAS**

**Chairman Consultancy Bureau for Isotopes Services  
(CBIS)**



## CONCLUSIONI

- **IN NESSUNO DEI PAESI ESAMINATI L'ABILITAZIONE DELL'ESPERTO QUALIFICATO E' SUDDIVISA FRA SETTORE INDUSTRIALE E SETTORE SANITARIO**
- **IN ALCUNI PAESI PUO' VENIRE ABILITATA ANCHE UNA ORGANIZZAZIONE DI PIU' PERSONE: Austria e Germania**
- **VI SONO PAESI CON UN NUMERO LIMITATO DI LIVELLI DI ABILITAZIONE (1 - 3): Belgio, Australia, India e Kenya**
- **VI SONO PAESI NEI QUALI OGNI ABILITAZIONE VIENE RILASCIATA PER QUEL DETERMINATO E LIMITATO SETTORE: U.K (RPA), Germania (RPO), Norvegia (RPO), Cina, Canada (RSO) e Iraq (RPO)**