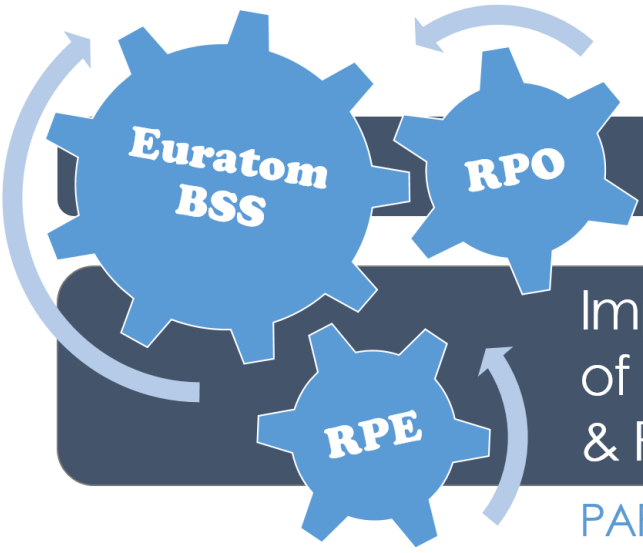

HERCA Workshop

Implementation of Radiation Protection Expert & Radiation Protection Officer

PARIS | 6-8 July 2015

Autorité de Sûreté Nucléaire | ASN
15-21, Rue Louis Lejeune, 92120 Montrouge, Paris, France

Organised in the framework of the HERCA Action Plan in relation to the transposition and implementation of Directive 2013/59/Euratom (Euratom-BSS)

Objectives

- To explore a common understanding of the new requirements on RPE/RPO
- To exchange national approaches relating to the implementation of the BSS on RPE/RPO. Whenever possible, to identify good practices with national implementation of RPE/RPO
- To develop recommendations, to be approved by HERCA, to facilitate implementation of BSS on RPE and RPO. To be sent to national authorities.
- To comment on the draft guidance from ENETRAP III
- To develop a joint vision on future ambitions of HERCA on RPE/RPO : duties, harmonisation (registration, other)

As far as possible, this workshop should allow to propose some common understanding on specific issues of the BSS requirements and, if possible, specific recommendations for those cases where flexibility is allowed for transposition.

EEAE

asn AUTORITÉ DE SÛRETÉ NUCLÉAIRE

Autoriteit Nucleaire Veiligheid en Stralingsbescherming

Background

Radiation protection education and training (E&T) has been of outmost interest for HERCA from the beginning of the Association in 2007. Nevertheless, it was recognised that the topic at that time was already covered by the ongoing European Commission (EC) sponsored programmes. HERCA therefore agreed not to duplicate the work. The interest of HERCA in E&T activities, in particular in the activities of ENETRAP following previous contacts from this consortium, has been confirmed in subsequent meetings.

All information available on www.herca.org

Several steps have been made by HERCA in this area. The TF E&T-RP was set up in November 2012 and has been led by Mr. Ton Vermeulen (ANVS). The ultimate mandate of the TF was to present a general picture of the situation on E&T in RP to the Board of HERCA and to identify the current need for harmonisation among HERCA member countries and eventually, if needed, the mandate of a future working group on E&T. The findings, conclusions and recommendations by the TF E&T were approved in November 2013. Among the recommendations from HERCA:

- HERCA recommended that the EC should develop further guidance on the duties and required practical competencies of the RPE
- HERCA recommended that the EC should develop further guidance on the role of the RPO and the required training and competencies.

On the occasion of the 14th meeting of HERCA (Stockholm 21-22 October 2014) the HERCA TF E&T was tasked with the development of criteria/guidelines for the implementation of RPE and RPO (making use of ENETRAP I, II, III results where appropriate) and respecting diversity in implementation of the BSS in the framework of the HERCA Action Plan on the role of HERCA in the transposition of the Euratom-BSS. It was decided that a workshop on this topic should be organized while paying attention to the deadlines of the ENETRAP III project which include among the deliverables guidance documents to support the implementation of E&T requirements for RPE and RPO.

The Council directive 13/59/Euratom[1] laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation (Euratom-BSS) introduces the RPE which evolves from the former "Qualified Expert" (Directive 96/29). The traditional role of the RPE is advisory but Article 82 (4) allows for the RPE to be assigned specific tasks such as radiation protection of workers and members of the public 'if provided for in national legislation.' The role of the RPO is new and is not mandatory since the task of the RPO may be carried out by a radiation protection unit or RPE.

Having a common understanding on the new requirements for RPE/RPO would facilitate the implementation of BSS on RPE and RPO at national level and the way towards a better harmonisation on this issue.

Contact
secretariat@herca.org

[1] The new BSS articles directly linked to RPE and RPO include: Art 4 (73, 74) – Definitions; Art 14 (2, 3) – General responsibilities for the education, training and provision of information; Art 34 – Consultations with a radiation protection expert; Art 79 – Recognition of services and experts; Art 82 – Radiation protection expert and Art 84 – Radiation protection officer.

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Topics to be covered

- Articulation between Art. 34, 68.d. and 82
- Recognition of RPE and if possible recognition of RPO (Art. 79). Interfaces Medical Physics Expert (MPE) with RPE (Art. 82- 84)
- Education & Training
- Relation RPE-RPO when both figures exist in the same facility (Art. 84). Graded approach on tasks and on organisation related to RPE/RPO.
- Occupational / public exposures
- Investigation and analysis of incidents/accidents (Art. 82.m)
- Independency of RPE/RPO from undertaking
- Understanding of the concept of advice
- ENETRAP III activities related to RPE/RPO

Workshop Programme Committee

BARDELAY Chantal*, GODET Jean-Luc*	ASN, FRANCE
HAIJER-GODTHELP Barbara C.*, VERMEULEN Ton* (Chair)	ANVS, THE NETHERLANDS
SWEN-GUNNAR Jahn	ENSI, SWITZERLAND
KAMENOUPOLOUS Vasiliki, KARFOPOULOS Konstantinos	EEAE, GREECE
LUMNICZKY Katalin	OOSKI, HUNGARY
MITTERBAUER Philipp	BMLFUW, AUSTRIA
RUEDA GUERRERO Maria Dolores	CSN, SPAIN
SCHMITT-HANNIG Annemarie	BfS, GERMANY
GUZMAN Olvido*	HERCA Secretariat (ASN)

(*) Members of the Workshop Secretariat

Target Audience

The workshop is targeted primarily on regulators from European countries represented in HERCA or invited by HERCA members, the EC and ENETRAP. International organisation carrying activities on this issue (IAEA, IRPA …) are also invited.

European Supports for the Workshop

HERCA supports and funds the organisation of the workshop. The European Commission and the ENETRAP consortium participate. ASN hosts the Workshop.

Organisation

This workshop is organised by the HERCA Task Force on Education & Training in Radiation Protection on behalf of HERCA in collaboration with the Dutch Authority for Nuclear Safety and Radiation Protection (ANVS), the Greek Atomic Energy Commission (EEAE) and the French Nuclear Safety Authority (ASN).

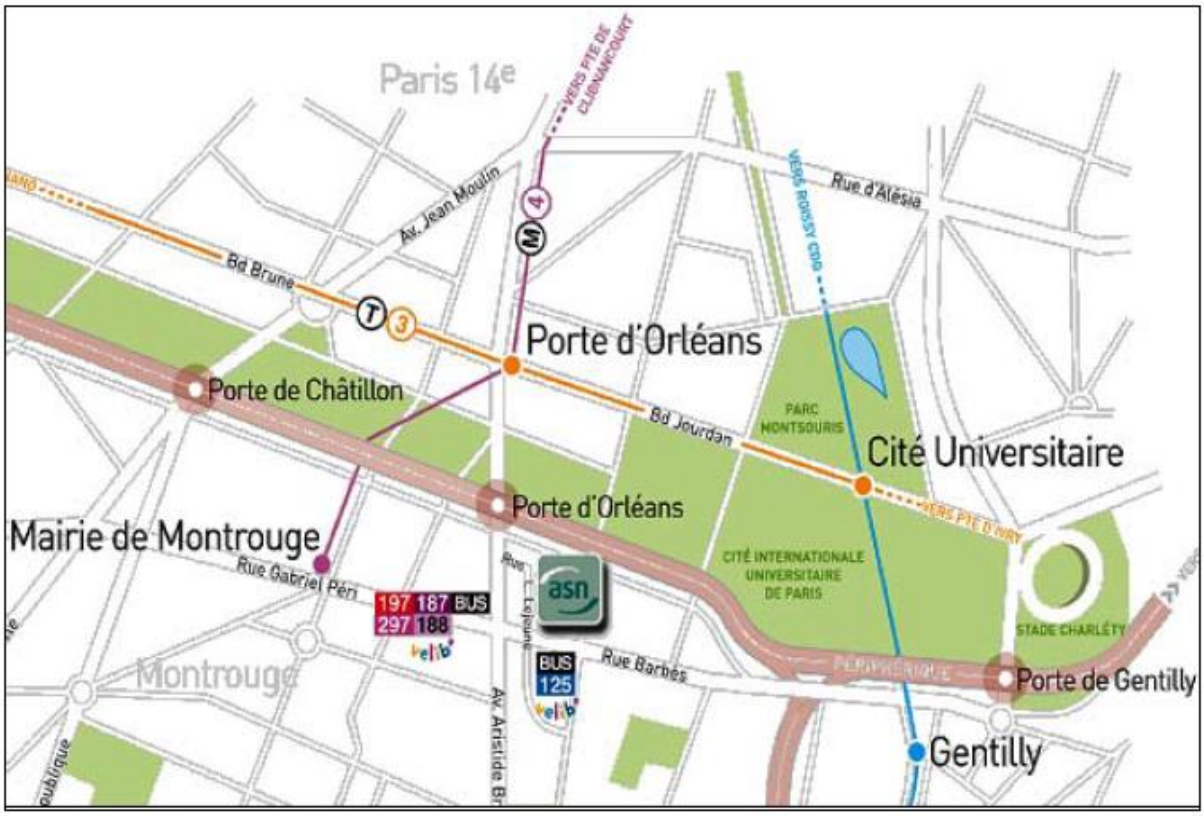
EEAE

asn AUTORITÉ DE SÛRETÉ NUCLÉAIRE

Autoriteit Nucleaire Veiligheid en Stralingsbescherming

Participants

Country	Name	Organisation	Affiliation
IAEA	LUCIANI Andrea	IAEA	IAEA
Austria	MITTERBAUER Philipp	BMLFUW	HERCA
Belgium	COECK Michèle	SCK CEN	ENETRAP
Belgium	VANDERLINCK Annie	FANC	HERCA
Czech Republic	DAVÍDKOVÁ Jana	SUJB	HERCA
Finland	HAVUKAINEN Ritva	STUK	HERCA
Finland	KORPINEN Helena	Ministry of Social Affairs and Health	HERCA
France	BARDELAY Chantal	ASN	HERCA
France	GODET Jean-Luc	ASN	HERCA
France	GUZMAN Olvido	ASN	HERCA
France	JAUNET Pierrick	ASN	HERCA
France	LAHAYE Thierry	DGT	HERCA
France	MATHIEU Peggy	DGT	HERCA
Germany	SCHMITT-HANNIG Annemarie	BfS	HERCA/ ENETRAP
Germany	VOGEL Julian	BfS	HERCA
Greece	KAMENOPOULOU Vasiliki	EEAC	HERCA
Greece	KARFOPOULOS Konstantinos	EEAC	HERCA
Hungary	LUMNICZKY Katalin	OSSKI	HERCA
Lithuania	STATKUS Vaidas	RSC	HERCA
Luxembourg	MUNDIGL Stefan	EC	EC
Norway	SJOMOEN Tone-Mette	NRPA	HERCA
Poland	LENART Roman	PAA	HERCA
Slovenia	SKRK Damijan	SRPA	HERCA
Spain	GALLEGO Eduardo	IRPA	IRPA
Spain	RUEDA GUERRERO Dolores	CSN	HERCA
Spain	CAMPOS TESOURO Rosa	CSN	HERCA
Sweden	HOLZWARTH Richard	SSM	HERCA
Switzerland	JAHN Swen-Gunnar	ENSI	HERCA
The Netherlands	ALPHENAAR Miranda	MINSZW	HERCA
The Netherlands	GODTHELP Barbara	ANVS	HERCA
The Netherlands	VERMEULEN Ton	ANVS	HERCA
United Kingdom	PAYNTER Richard	EUTERP	ENETRAP/EUTERP
United Kingdom	STEWART Joanne	PHE	HERCA/ENETRAP



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How to get to ASN's Headquarters:

BUS	BUS 125	Bus stop Barbès - Ory
	BUS 68	Bus stop Porte d'Orléans - Ernest Reyer
	BUS 126 et 128	Bus stop Mairie de Montrouge
	BUS 187, 188, 197 et 297	Bus stop Gabriel Péri
M	M 4	Station Porte d'Orléans Exit 1 pl. du 25 août 1944 then 7 min
RER	RER B	Station Gentilly then 12 min
T	T 3	Station Porte d'Orléans then 7 min
	By car: 2 min from the ring highway (périphérique), exit Porte d'Orléans	

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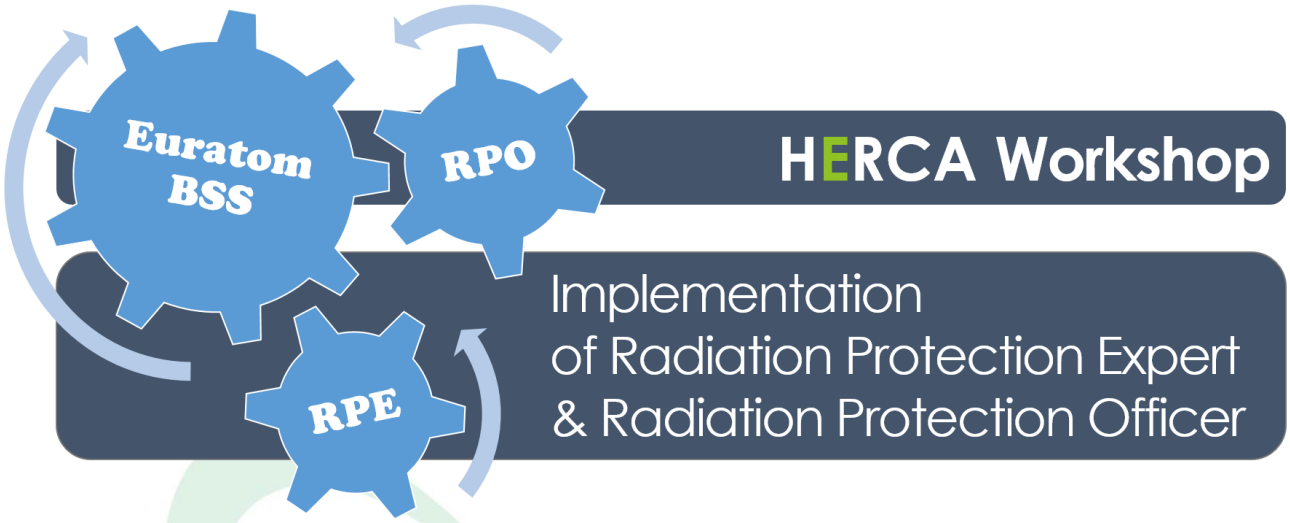

HERCA Workshop

Implementation of Radiation Protection Expert & Radiation Protection Officer

Autorité de Sûreté Nucléaire | ASN
15-21, Rue Louis Lejeune, 92120 Montrouge, Paris, France

Programme

Monday July 6, 2015

Opening Session

Chairperson: Jean-Luc Godet
Co-chairperson: Ton Vermeulen

It.	Time	Topic	Speaker
	13:00-13.30	Registration opening	
1	13.30-13.45	Introduction ▸ Official welcome	P.F. Chevet, HERCA Vice-Chair
2	13.45-14.00	▸ Introduction to the Workshop - Objectives	Ton Vermeulen
3	14.00-14.15	First comments from EC	Stefan Mundigl
4	14.15-14.45	Current activities by International Organisations on RPE/RPO ▸ IRPA activities related to RPE/RPO ▸ IAEA E&T activities in radiation protection: focus on QE and RPO	Eduardo Gallego Andrea Luciani
5	14.45-15.00	Questions to speakers	

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Session I

Exchange on national approaches relating to the implementation of the Euratom BSS on RPE/RPO

Chairperson: Jean-Luc Godet

Co-chairperson: Ton Vermeulen

Rapporteurs : Pierrick Jaunet, Konstantinos Karfopoulos

It.	Time	Topic	Speaker
I.1	15.00-15.15	**Belgium** Qualification in radioprotection in Belgium in view of the new BSS-Directive (2013/59/ Euratom)	Annie van der Linck
I.2	15.15-15.30	**Finland** The Finnish approaches relating to the implementation of the BSS on RPE/RPO	Ritva Havukainen
I.3	15.30-15.45	**France** Approaches Relating to the Implementation of the BSS on RPE/RPO in France.	Jean-Luc Godet
I.4	15.45-16.00	**Germany** RP qualification and functions in a changing European landscape: Education & Training in Germany vis-à-vis the transposition of the new EURATOM BSS	Julian Vogel
I.5	16.00-16.20	**Questions to speakers**	
	16.20-16.40	**Coffee break**	
I.6	16.40-16.55	**Greece** RPE-RPO: thoughts and initiatives for the transposition of the 2013/59/EURATOM Directive	Vasiliki Kamenopoulou
I.7	16.55-17.10	**Hungary** Approaches Relating to the Implementation of the BSS on RPE/RPO in Hungary.	Katalin Lumniczky
I.8	17.10-17.25	**Spain** Practical implementation of the concepts of RPE, RPO in Spanish Regulations	Dolores Rueda
I.9	17.25-17.40	**Sweden** The Swedish implementation of Council Directive 2013/59/EURATOM of 5 December 2013 regarding Radiation protection expert (RPE), Radiation protection officer (RPO) and some other related articles	Richard Holzwarth
I.10	17.40-18.00	**Questions to speakers**	
	18.00	**End of the day** (Session I will continue on the 2nd day)	
	18.00	**Cocktail (offered by HERCA)**	

Tuesday July 7, 2015

Session I (Cont.)

Exchange on national approaches relating to the implementation of the Euratom BSS on RPE/RPO

Chairperson: Jean-Luc Godet

Co-chairperson: Ton Vermeulen

Rapporteurs : Pierrick Jaunet, Konstantinos Karfopoulos

It.	Time	Topic	Speaker
I.11	9.00-9.15	The Netherlands Redefining the position of the Dutch supervising expert in light of the implementation of the basic safety standards in the Netherlands	Barbara Godthelp
I.12	09.15-9.30	Switzerland Regular Requirements on Education and Training for Radiation Protection in Switzerland: Comparison with Definitions of RPE and RPO in EU BSS	Jahn Swen-Gunnar
I.13	9.30-9.45	United Kingdom RPE and RPO in the UK	Joanne Stewart
I.14	9.45- 10.00	Questions to speakers	
	10.00-10.30	Coffee break	
I.15	10.30-10.45	Report of Session I	Rapporteurs

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Session II
Recommendations to facilitate implementation of BSS on RPE and RPO

Chairperson: Ton Vermeulen

Co-chairperson: Jean-Luc Godet

Moderators/Rapporteurs: Vasiliki Kamenopoulou, Jean-Luc Godet, Olvido Guzmán, Katalin Lumniczky

Session II.a | Introduction (Plenary)

It.	Time	Topic	Speaker
II.1	10.45-11.00	Introduction	Barbara Godthelp

Session II.b | Discussion on issues identified (Two Working Groups)

It.	Time	Topic	Speaker
II.2	11.00-13.00	The role of the RPE focusing on its advisory component - Analysis of the concept of advice ▸ Independence of RPE and RPO from undertaking The difference in roles of RPE-RPO ▸ Responsibilities in existing, planned and emergency exposure situations exposure considering public and occupational exposures ▸ Relation with MPE for situations where all 3 exist in a facility The concept of graded approach in roles and responsibilities of RPE/RPO in various sectors The concept of graded approach in recognition of RPE / RPO (when applicable) ▸ Qualifications ▸ Adoption of the EQF System in E&T for RPE and RPO	ALL
	13.00-14.00	Lunch	

Session II.c | Reporting by the Working Groups (Plenary)

It.	Time	Topic	Speaker
II.3	14.00–14.30	Reporting by the WGs on session II	Rapporteurs

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Session III
ENETRAP III activities related to RPE/RPO

Chairperson: Richard Paynter
Co-chairperson: Ton Vermeulen
Moderators/Rapporteurs: Annemarie Schmitt-Hannig, Joanne Stewart

Session III.a | Introduction (Plenary)

It.	Time	Topic	Speaker
III.1	14.30-15.00	Overview on ENETRAP projects	Michèle Coeck
III.2	15.00-15.30	Guidance document by ENETRAP III (WP 7) and status of WP6 (recognition)	Annemarie Schmitt-Hannig Joanne Stewart
III.3	15.30–15.45	ENETRAP point of view on Session I & II	ENETRAP Representatives
	15.45-16.00	Coffee break	

Session III.b | Discussion about ENETRAP guidance with HERCA member states

It.	Time	Topic	Speaker
III.4	16.00-17.45	▸ What are still open questions in relation to implementation? ▸ Consistency between national approaches and ENETRAP guidance ▸ View on EQF in Euratom/EQF level for RPE/RPO? ▸ Terminology: competent authority, regulator, diploma/registration/recognition ▸ Input to guidance document	ALL
	17.45	End of the day	

Wednesday July 8, 2015

Session III.c | Reporting on Session III

It.	Time	Topic	Speaker
III.5	9.00-9.15	Reports session III	Annemarie Schmitt-Hannig Joanne Stewart
III.6	09.15–9.30	Discussion on the report of session III ▸ Role for HERCA to accompany ENETRAP in further work?	ALL

Session IV
Conclusions and Recommendations

Chairperson: Vasiliki Kamenopoulou

It.	Time	Topic	Speaker
IV.1	9.30 – 10.15	Discussion after short presentation on HERCA findings (TF E&T) Future ambitions of HERCA on RPE/RPO: duties, harmonisation (recognition, other)	Ton Vermeulen
	10.15-10.45	Coffee break	
IV.3	10.45-11.45	Possible 'HERCA Recommendations'	Jean Luc Godet
IV.2	11.45-12.00	EU Commission point of view on the main issues raised during the workshop	Stefan Mundigl
	12.00-12.30	Concluding remarks by the Workshop Chairpersons	Jean-Luc Godet Ton Vermeulen
	12.30	End of the workshop	

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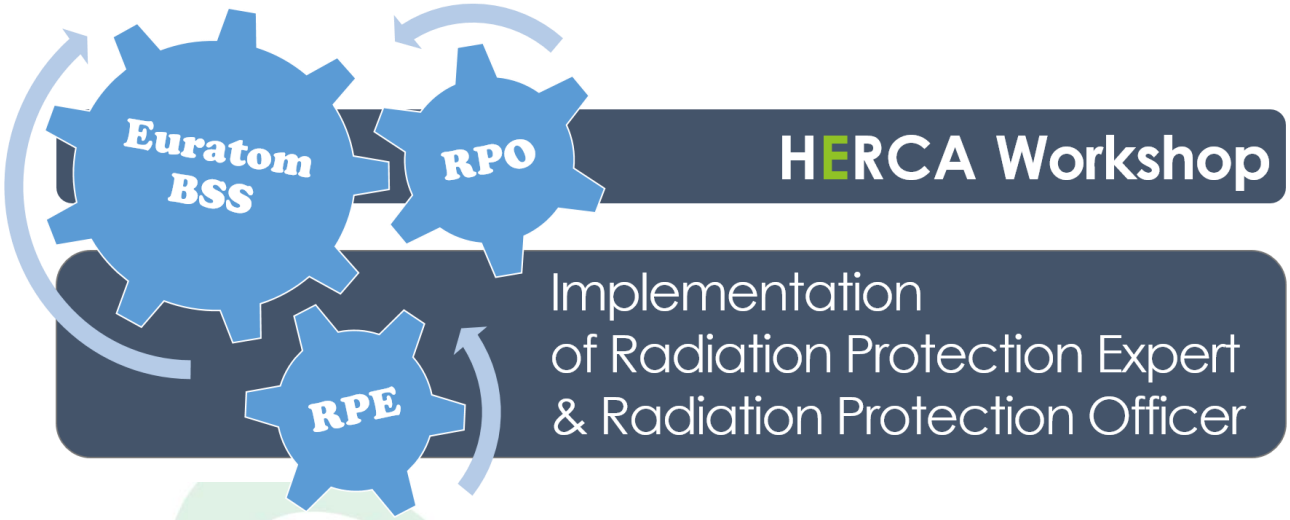

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15-21, Rue Louis Lejeune, 92120 Montrouge, Paris, France

Abstracts

Country	BELGIUM
Author	Annie VANDERLINCK (annie.vanderlinck@fanc.fgov.be)
Organisation	Federal Agency for Nuclear Control (FANC)

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

Abstract

In 2007 already, in preparation for the 1st EUTERP Workshop, Belgium made some suggestions on basic education and ongoing training that it deemed necessary for Radiation Protection Experts and Officers (both RPEs and RPOs), whose missions and tasks were being discussed by the European Council in the prospect of laying down basic safety standards for radiation protection (Directive 2013/59/Euratom).The recommendations that resulted from this workshop were integrated into the ENETRAP project.

The purpose of this abstract is to update Belgium's point of view as a result of two milestones: firstly, the publication of Directive 2013/59/Euratom and the compulsory transposition of this Directive into national law before February 2018 and, secondly, the IRRS mission held in December 2013, which led the FANC to reflect on how health physics is organised in Belgium, and the implementation of a resulting action plan for 2017.

With a view to prepare this transposition at European level, the Member States have participated in international working groups to ensure uniform interpretation of the requirements set forth in Directive 2013/59/Euratom (BSS). HERCA has stressed the need to define minimum education and competence requirements for Radiation Protection Experts and Officers on European level. Its action plan in relation to the transposition and implementation of the BSS explicitly includes both the RPEs/RPOs issue and the ENETRAP results for the specific case of health physics experts.

EUTERP could/should consider coming up with recommendations to adapt the education and training program for radiation protection experts (and officers) and, in particular, to add minimum skill requirements in risk management and quality systems.

Country	FINLAND
Authors	Ritva HAVUKAINEN[1] (ritva.havukainen@stuk.fi), Principal Advisor Mika MARKKANEN[1] (mika.markkanen@stuk.fi), Section Head Helena KORPINEN[2] (helena.korpinen@stm.fi), Senior Officer
Organisation	[1] Radiation and Nuclear Safety Authority (STUK) [2] Legal Affairs, Ministry for Social Affairs and Health

The Finnish approaches relating to the implementation of the BSS on RPE/RPO

Abstract

According to the Finnish Radiation Act (592/1991), a party operating a radiation practice is responsible for ensuring that its personnel possesses the competence and training required for their duties. An application for a safety license shall be supplemented with a description of the applicant's organization, specifying the name of the Radiation Safety Officer (RSO). The duties of a RSO resemble duties of both a Radiation Protection Officer (RPO) and a Radiation Protection Expert (RPE) as prescribed in the Directive 2013/59/Euratom. Therefore, in most practices there is no need to nominate a separate RPE. However, a separate RPE shall be nominated where, depending on the type of the practice, some specific competence is needed and the RSO lacks such competence. Medical Physics Experts shall be nominated in the medical use of radiation.

The directive 2013/59/Euratom shall be transposed into national legislation before 6th February, 2018. This has called for an overall renewal of the Finnish radiation legislation when considering also that the current Radiation Act is no longer fully consistent with the Constitution (come into force 2000 and because the Radiation Act has become somewhat fragment due to many changes in time. The Ministry for Social Affairs and Health is leading and coordinating the preparation of the new radiation legislation and transposition work. In this connection the education and training as well as the requirements of RPE and RPO will be reviewed and updated as necessary. The cross-cutting issues involving other ministries will be handled in the steering group nominated by the Ministry for Social Affairs and Health. Lessons learned of the applied practices and the results of a survey to the licensees will be used in the update of the radiation legislation. A graded approach will be applied to the regulatory oversight and also to the requirements stipulated to the education and training of RPE and RPO.

Country	FRANCE
Authors	Jean-Luc GODET[1] (jean-luc.godet@asn.fr) Chantal BARDELAY[1] (chantal.bardelay@asn.fr) Thierry LAHAYE[2] (thierry.lahaye@travail.gouv.fr)
Organisation	[1] French Nuclear Safety Authority (ASN) [2] French Labour General Directorate (DGT)

Introduction of RPE/RPO requirements in the French regulation – First outlines

Abstract

The double level « RPE/RPO » introduced in Council 2013/59 Euratom Directive (Euratom-BSS) does not exist in the current French system of radiation protection of workers in place since 2003. For the transposition of the 96/29 Euratom directive, it was considered that the «*Personne Compétente en Radioprotection* (PCR) » (Competent Person in Radiation Protection) was deemed to be equivalent to the « Qualified Expert », as defined by the 96/29 BSS.

In the framework of the transposition of the new Euratom-BSS requirements related to RPE/RPO, the French Labour Ministry and ASN intend to improve the current system, avoiding destabilizing the existing system and incurring in useless expenses.

In the first part, the French presentation will describe the existing radiation protection system based on internal PCR appointed by the employer, alone or member of a team, with the possibility to use external PCR (only in case of use of X-ray generators), and the ongoing training in place updated in 2012. For the understanding of the French system in place, the role of external bodies, agreed by ASN, in charge of the technical control of radiation protection, will also be presented.

In the second part, the outlines of the transposition on the specific RPE/RPO requirements will be presented. The new system under preparation will be supported by the graded approach, introducing, for both, public and occupational exposures, a large differentiation between Nuclear Basic Installations (BNI), as nuclear power plants) and other radiation facilities subject either to registration or licensing. In this new frame, the role of external bodies in charge of the technical control of radiation protection and external PCR will be re-considered. Probably, the new system will propose more opened solutions that the existing one, offering different options between the “internal PCR” (as it is under the current scheme) or a mix of “internal PCR” and “external agreed RPE”, and also, for BNI, a “recognized” Radiation Protection Service” (by ASN) submitted to a Quality Management System”. In all cases, the key points of the transposition will be the training of PCR and “external agreed RPE” and the “independency” between “internal PCR” and the employer.

Country	GERMANY
Authors	Ralf STEGEMANN (rsii3@bmub.bund.de) Julian VOGEL (julian.vogel@bmub.bund.de)
Organisation	German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)

RP Qualification & Functions in a Changing European Landscape:

Education & Training in Germany vis-à-vis the transposition of the new EURATOM BSS

Abstract

With regard to the provision of a professional management structure and adequately qualified staff, the current German legislative framework is based on conferring responsibility in radiation protection to the *Radiation Protection Executive* and one or more designated *Radiation Protection Supervisor*s (SSB). The SSB is required to have the *requisite expertise in radiation protection* and professional integrity and be granted sufficient competences within the undertaking to perform the respective tasks and duties. Requirements are laid down in regulatory guidelines, proportionate to the complexity and radiological risk of a practice. This approach ensures that both professional RP expertise and personal responsibility are available within the undertaking's organizational structure.

In the 2013 EURATOM Basic Safety Standards directive currently being transposed by EU Member States, the new functions of RPE and RPO have been introduced, broadening concepts from the previous directive. The legally binding provisions in the BSS are sufficiently prescriptive to ensure a minimum level of available competences, while sufficiently general to accommodate widely varying national approaches. For initiatives establishing technical guidelines for implementation (such as within HERCA or ENETRAP projects), one challenge will be to implement flexibility to allow for this diversity while still providing sound recommendations for an approach to RP qualifications.

The German concept of SSB, on a general level, joins the requirements for both RPE and RPO by comprising both a qualification approved by the competent authority and tasks and capacity within the undertaking. The updated legislation currently being worked out by the federal government will, as a consequence, contain only minor updates in the field of E&T. On the technical level, it is estimated that the existing national E&T framework will be adapted in a smooth transition, with challenges in the integration of practices with natural radiation source (former *work activities*) and the continued need to ensure and improve quality of training when introducing new types of practice and technological developments.

Country	GREECE
Authors	Konstantinos KARFOPOULOS (konstantinos.karfopoulos@eeae.gr) Vasiliki KAMENOPOULOU (konstantinos.karfopoulos@eeae.gr)
Organisation	Greek Atomic Energy Commission (EEAE)

RPE-RPO: thoughts and initiatives for the transposition of the 2013/59/EURATOM Directive

Abstract

In the light of the transposition of the Council Directive 2013/59/Euratom in the national legislation, the Greek Atomic Energy Commission (EEAE), the national competent authority in the fields of radiation protection and nuclear safety, will introduce the draft legislative acts.

The first step is the review and revision of the national regulatory framework taking into account the lessons learned from its implementation. The directive will be transposed by a series of legislative documents of different types. The three radiation protection principles have been introduced in the Law 4310/2014, which also provides for the issuance of a presidential decree that will transpose the directive itself. The presidential decree will then provide for the secondary documents, such as ministerial decrees and guidelines that will complete the new national regulatory framework.

A critical element, in order to fulfil the Directive requirements, is the clarification of the competence, roles and responsibilities, and where appropriate, the criteria for the recognition of the professionals and experts (RPE, RPO, MP, and MPE) involved in activities with ionizing radiation. In the drafting of the new legislation, EEAE takes into account the European practice, the need for harmonization aiming to the common recognition criteria, the existing situation in the country; the principle of the graded approach will be considered.

In this work, the existing legislative framework, concerning the RPE, RPO, MP and MPE, will be commented and then compared to the requirements of the new Directive. The preparatory procedures and first initiatives (e.g. collaboration with stakeholders) and thoughts (e.g. description of the required qualification in respect to the facility / activity) for the development of the new regulatory framework will be presented. The E&T of the professionals concerned is a part of the E&T national strategy in radiation protection. This strategy will be revised by the EEAE, in order to take into account the training needs following the implementation of the new legislation.

Country	HUNGARY
Authors	Katalin LUMNICZKY[1] (lumniczky.katalin@osski.hu) Richárd ELEK[1] (elek.richard@osski.hu) Sándor PELLET[1](pellet.sandor@osski.hu) Csilla PESZNYÁK[2] (pesznyak@reak.bme.hu) Géza SÁFRÁNY[1] (safrany.geza@osski.hu)
Organisations	[1] National Public Health Center – National Research Directorate for Radiobiology and Radiohygiene [2] Budapest University of Technology and Economics, Institute of Nuclear Techniques

Approaches Relating to the Implementation of the BSS on RPE/RPO in Hungary

Abstract

The objective of the presentation is to introduce the radiation protection training system in Hungary in its actual state, presenting those fields that are already in conformity with the BSS requirements and most importantly highlighting those, which need further harmonisation.

The concept of Radiation Protection Expert (RPE) and Radiation Protection Officer (RPO) are both recognised in the Hungarian regulation with tasks and responsibilities in great part overlapping with those specified in the BSS. Radiation protection training requirements for RPE and RPO are specified in the Decree No. 16/2000. (VI.8.) of the Minister of Health on the enforcement of Clauses of the Nuclear Law CXVI/1996. Basically, three types of radiation protection training courses are foreseen in the above mentioned decree: basic, advanced and comprehensive level courses. These training courses are compulsory and are valid for five years and after that period a refreshing course is needed. The decree strictly defines the type of course needed for the different types of activities. Educational level and competencies required for RPE and RPO are also defined in various Hungarian legal documents. The presentation will specifically address those fields where the Hungarian regulation in relation with education and training is not fulfilling BSS requirements and we present suggested solutions for the implementation of BSS requirements.

Country	SPAIN
Authors	M. Dolores RUEDA (drg@csn.es) Ignacio AMOR (iac@csn.es) Javier ZARZUELA (jzj@csn.es)
Organisations	Nuclear Safety Council (CSN)

Practical implementation of the concepts of RPE, RPO in Spanish Regulations

Abstract

1. Introduction

At present time, like the rest of the EU countries, Spain is committed to the process of transposing of the Directive 2013/59/EURATOM to the national regulation.

In Spain, the implementation of the BSS regarding RPE and RPO should not be a relevant challenge because, in radiological protection, a staff classification based on the level of responsibilities and tasks, has been in place for 30 years, and the functions and tasks considered are quite consistent with those defined in BSS Directive for RPE and RPO.

In this paper, the roles, responsibilities and hierarchies of individuals and organizations responsible for radiation protection in Spain, are presented and compared with the definitions and tasks of RPE and RPO in EU BSS.

2. Radiation Protection Expert (RPE)

"Individual (or group of individuals) having the knowledge training and experience needed to give radiation protection advice to ensure the effective protection of individuals, and whose competence in this respect to act is recognized by the competent authority"[2]

"Member States shall ensure that arrangements are made for the establishment of education, training and retraining to allow the recognition of radiation protection experts and medical physics experts, as well as occupational health services and dosimetry services, in relation to the type of practice".[3]

Radiation protection in Spain is regulated by a Royal Decree, approved in 2001, that implements the provisions of Directive 96/29 Euratom (RD 783/2001).

According to Spanish regulations, the licensee of the facility (or the activity) is the prime responsible for the implementation of the legal requirements in radiation protection; nevertheless these regulations also establish that in facilities with a significant radiological risk, a Radiation Protection Service (RPS)

[2] Art.4.73 Directive 2013/59/EURATOM

[3] Art. 14.2 Directive 2013/59/EURATOM

may be required by the Spanish Regulatory Body (CSN) in order to provide advice and technical support to the licensee to ensure appropriate implementation of radiation protection rules.

The mandatory CSN Instruction IS-08 specifies the facilities in which the licensee must be supported by a RPS:

- Nuclear power plants and nuclear fuel cycle facilities.
- Hospitals with Radiotherapy, Nuclear Medicine and Diagnostic Radiology facilities (simultaneously).
- Medical facilities equipped with cyclotrons for medical isotope production and diagnostic use.
- Research facilities involving more than fifty people using or handling radioactive material.

In addition to this, Spanish regulations, in Diagnostic Radiology Facilities establish that, the participation of an external RPS (authorized by the CSN) is required for:

- The certification of the project at the registration stage.
- Carrying out an annual quality control review at the operation stage.
- The definition and development of Radiological Protection Program
- The periodical certification of conformity required by Spanish regulations

The RPSs are essential elements to ensure the correct application of the radiation protection system in the facilities in which they are required so, Spanish regulations establish that:

- The RPS must be organized independently from the rest of the departments of the facility, and the Head of the RPS must be in direct functional subordination to the manager of the facility.
- The RPS must be specifically authorized by the CSN for performing its activities and the Head of the RPS must also obtain an official license from the CSN which is the highest qualification category in our country in terms of radiation protection

The functions of the Head of the RPS are quite consistent with those defined in the EU BSS for RPE. Also, in Spain, the Head of RPS has functions regarding not only to exposed workers but also to the protection of the public and management of radioactive waste.
"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".[4]

The roles and responsibilities of the RPS are set out in the Guide 7.3 (CSN).

Requirements to be fulfilled to obtain the diploma of Head of an RPS (RPE) in Spain:

a) Qualifications: An official Bachelor's degree, or a degree in Engineering or Architecture, or an officially recognized equivalent, in the case of non-national degrees.

   The ENETRAP reference training scheme provides a good model for the knowledge and theoretical competence on the EQF level 6 (bachelor degree or equivalent) and 7 (master degree or equivalent). The details of the reference syllabus can be found in the ENETRAP II W.D. 4.2 report: Reference Standards for RPE training [6]. Information on practical competence can be found in W.D 2.1 report: Report on requirements and methodology for recognition of RPEs [7].[5]

[4] Art. 82 Directive 2013/59/EURATOM

[5] From Education and Training in Radiation Protection HERCA Task Force on Education and Training in Radiation Protection Conclusions & Recommendations

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b) Specific training. The following shall be required:
- Training in theoretical background and practical aspects of radiation protection.
- Knowledge in matters related to radiation safety, with respect to the type of facilities where services are going to be rendered.

c) Experience and practice.
- A minimum three-year experience must be demonstrated in the field of radiological protection. Nonetheless this time shall vary, depending on the type of facility in which services are to be rendered, as well as on the practical exercises carried out during the experience period

In addition to these general requirements, Spanish Regulations (RD 183/2008) also establish that the Head of a RPS in medical facilities must have an official recognition as Medical Physics Expert (MPE).

In the particular case that the candidate for diploma of Head of a SPR requests this title to render services in an X-ray facility for purposes of medical diagnosis, exclusively, a minimum six month experience must be proven within the field of control and/or monitoring of radiological safety of facilities for medical radiodiagnosis.

3. Radiation Protection Officer (RPO)

"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"[6].

"Member States may make arrangements for the establishment of education, training and retraining to allow the recognition of radiation protection officers, if such recognition is provided for in national legislation".[7]

The task assigned in the Directive to the RPO can be considered consistent to those assigned in Spanish regulation to the so-called "supervisor".

"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"[8].

Supervisor: Person with a specific license issue by the Nuclear Safety Council (CSN) which enables to direct the operation of a nuclear or radioactive facility.[9]

In Spain, the supervisor competence to act is recognized by the competent authority (CSN).

To obtain the supervisor license granted by the CSN, the applicants must have sufficient knowledge on safety and radiation protection in general. Also, an appropriate level of understanding of the operation, rules and operating procedures, risks and protective measures of the specific installations in which they will perform their activity, is required.

The qualification requirement for supervisors is an official Bachelor's degree or a medium Bachelor´s degree.

"The EQF level comparable to an RPO qualification is envisaged to be the level of 3 to 6 depending on the practice. Further guidance should be developed for RPOs including core competences and practical experience specific for different types of practices derived from BSS article86".[10]

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[6] Art.4.74 Directive 2013/59/EURATOM

[7] Art. 14.3 Directive 2013/59/EURATOM

[8] Art. 84.1 Directive 2013/59/EURATOM

[9] Art 47 RD 1836/1999

[10] From Education and Training in Radiation Protection HERCA Task Force on Education and Training in Radiation Protection. Findings Conclusions & Recommendations
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Additionally, in Spain the persons who work under the immediate direction of a supervisor handling equipment or radioactive elements are called “operators” and also need a specific license from the CSN.

The qualification required for operators is, at least, a second grade technological vocational training (depending on the field).

The requirements to get the license to supervise and operate nuclear and radioactive facilities are set out in the Royal Decree of nuclear and radioactive facilities (Rd 1836/1999) and in different CSN safety guides.

4. Conclusions

Related to radiation protection and workers, in Spain there exists a staff classification based on the level of responsibilities and task assigned to these professionals.

The functions and tasks considered for them are quite consistent with those defined in BSS Directive for RPE and RPO.

In any case, the competence, in this respect, to act is recognized by the competent authority (CSN).

According to Spanish regulations, the undertaking is the responsible for the implementation of the legal requirements in radiation protection.

In facilities with a significant radiological risk, a Radiation Protection Service (RPS) may be required by the Spanish Regulatory Body (CSN) to provide advice and technical support to the undertaking to ensure appropriate implementation of radiation protection rules.

The RPS must be specifically authorized by the CSN and the Head of the RPS (RPE or MPE) must also obtain an official license from the CSN which is the highest qualification category in our country in terms of radiation protection.

The Head of RPS (RPE) has functions regarding not only exposed workers but to the protection of the public and management of radioactive waste.

Country	SWEDEN
Authors	R. HOLZWARTH (Richard.holzwarth@ssm.se) C-G. STÅLNACKE (Carl-Goran.Stalnacke@ssm.se) S. RICHTER (Sven.Richter@ssm.se) V. NILSSON (Virva.Nilsson@ssm.se)
Organisations	Swedish Radiation Safety Authority (SSM)

The Swedish implementation of COUNCIL DIRECTIVE 2013/59/EURATOM regarding Radiation protection expert (RPE), Radiation protection officer (RPO) and some other related articles

Abstract

The implementation of BSS in Sweden is handled by the competent authority, The Swedish Radiation Safety Authority (SSM).

The BSS articles concerning RPE and RPO, their planned implementation as well as the competence requirements for these functions are addressed and discussed in this presentation.

The qualified expert as addressed in BSS directive *Council Directive 96/29/Euratom* was implemented according to article 55. Therefore, regulatory requirements or specific license requirements concerning functional competence at nuclear facilities (e.g. NPP's and waste handling facilities), at some appointed medical practices and certain other activities (e.g. industrial radiography, certain practices with sealed/unsealed radioactive sources) are in place.

SSM discusses presently how to introduce RPO in national legislation and require, when applicable, that licensees have the competent resources needed to execute the tasks according to article 84 (Radiation protection officer).

The use of RPE and related competent resources will probably be expanded to a more generally available resource for any application of ionizing radiation in society, in order to increase availability of competence among users.

The procedure of recognition will be revised and improved.

Country	SWITZERLAND
Authors	Jahn Swen-Gunnar[1] (Swen-Gunnar.Jahn@ensi.ch) Michel Hammans[2] (Christina.Urscheler@bag.admin.ch) Christina Urscheler[3] (Michel.Hammans@suva.ch)
Organisations	[1] Swiss Federal Nuclear Safety Inspectorate (ENSI) [2] Swiss Accident Insurance Agency (SUVA) [3] Swiss Federal Office of Health (BAG)

Regular Requirements on Education and Training for Radiation Protection in Switzerland: Comparison with Definitions of RPE-RPO in EU BSS

Abstract

The presentation will describe and discuss following aspects:

Swiss RP law and ordinance describe six categories of persons who are involved with ionizing radiation (exposed to radiation, handling with sources, performing RP tasks, taking responsibility). From these six categories, four categories need recognised education and training. Two of these four categories almost correspond to the definition of RPO. Within these two categories, the ordinance about education and training lists more than 45 groups with different competence catalogues depending on the nature of radiation and its usage (nuclear, medicine, industrial, transportation …), level of risk and responsibility/task. Therefor requirements on more than 45 different competences as well as on the content of education and training courses are determined in the ordinance.

In Switzerland the main task of RPE, giving advice to the licensee (and other involved persons), is performed in different ways by the persons in competent authorities, by some of those RPO responsible of implementing regular requirements into company rules (e.g. RP-Manager in nuclear facilities) by scientific institutes (for special items) as well as by the teachers and trainers.

Bilateral arrangements between Swiss and German regulatory bodies exist for the recognition of qualification of RPO in some fields (for example: RPO in nuclear facilities).

Country: THE NETHERLANDS

Authors:
B.C. GODTHELP[1] (barbara.godthelp@anvs.nl)
A.M.T.I. VEMEULEN[1] (ton.vermeulen@anvs.nl)
T.J.M. MOLENAAR[2] (molenaar@nrg.eu)
I.H. VAN ELSÄCKER-DEGENAAR[2] (vanelsacker@nrg.eu)

Organisations:
[1] Authority for Nuclear Safety and Radiation Protection (ANVS)
[2] Nuclear Research & consultancy Group (NRG)

Redefining the position of the Dutch supervising expert in light of the implementation of the basic safety standards in the Netherlands

Abstract

The introduction of the "Radiation Protection Officer" and the "Radiation Protection Expert" in the new European Basic Safety Standards (BSS, 2013/59/Euratom) required a thorough examination of the Dutch system for radiation protection in order to determine whether we could fulfil the new requirements for the radiation protection officer and the radiation protection expert.

In the Netherlands practises with ionizing radiation can only be carried out by, or under the supervision of individuals that are adequately trained in radiation protection. This applies for all practises, including medical practises. In the Dutch legislation three types of experts are recognized: the "general coordinating expert", the "coordinating expert" and the "supervising expert". The general coordinating expert and the coordinating expert are comparable with the radiation protection expert (RPE) as described in the BSS, although the knowledge and skills level of the general coordinating expert is higher than that of the coordinating expert. The implementation of the RPE in the Dutch radiation protection system is well advanced as shown by the learning outcomes and registration requirements for the coordinating expert laid down in Dutch legislation. The supervising expert is comparable with the radiation protection officer (RPO) in the BSS. Although the Dutch supervising expert is comparable to the RPO in terms of role and responsibilities, practise-specific requirements are currently lacking in the Dutch legislation. A more practise-specific approach for the supervising expert is therefore necessary to fully implement the RPO in the Dutch system for radiation protection.

Thus, the role, duties, responsibilities and training requirements for the different radiation protection officers were thoroughly analysed. This resulted in a proposal for eleven possible specialisations for the RPO in the Netherlands. Based on this analysis, a model for an adapted Dutch educational system for the RPO was proposed. The training of a RPO in this new model would consist of a core training module followed by a practice-specific training module. With the participation of the Dutch stakeholders in the respective branches and teachers/trainers we recently started with the process of implementing the RPO in the Dutch system of radiation protection.

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Country	THE UNITED KINGDOM
Authors	J. E. STEWART (joanne.stewart@phe.gov.uk), Head, Radiation Protection Service
Organisations	Public Health England (PHE)

Transposition of the requirements in 2013/59/EURATOM relating to RPE and RPO in the UK

Abstract

In the UK work to effect the transposition of the Euratom Basic Safety Standards is being taken as a co-ordinated approach between relevant Government Departments, Agencies and Regulatory Bodies. Fulfilling the BSSD requirements for RPE and RPO are not considered to be particularly problematic, although some changes to current practice are being considered.

In this short presentation, existing arrangements for RPE and the RPO in the UK will be summarised and an update provided on the progress with transposition.

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All information available on:
www.herca.org

Contact:
secretariat@herca.org