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NEWSLETTER

European Training and Education in Radiation Protection Platform

In this isseu more about the First EUTERP Platform Workshop

Editorial

We are halfway now in the 3-year contract period of the Platform, so time to look back on what we have achieved, as well as to look forward to what we still have to do. The objectives of the EUTERP project are to remove obstacles for the mobility of RPEs and RPOs within the EU through harmonisation of criteria and qualifications for and mutual recognition of such professionals; to facilitate the transnational access to vocational education and training; and to better integrate education and training into occupational radiation protection infrastructures in the Member, Candidate and Associated States of the EU. With regard to the first and third point, we made an important step forward in the first workshop. The issues of definitions, qualifications and recognition have been addressed extensively at the workshop and led to some important recommendations which are being taken into account by the European Commission and the IAEA. With regard to the second point, the Platform serves as a means of communication about training events and the development of training and education courses. Our Platform consists of the 31 countries within the EU region, 4 countries outside the EU region, and 16 international organisations and networks. In my opinion, this shows that we are on the right track in achieving our goals.

The role of the NCPs will become more and more important in the coming period. The Steering Committee has drafted proposals for new definitions of the RPE and RPO, as well as requirements for qualification and recognition of these professionals (see this Newsletter). These proposals will be discussed during our next workshop and will lead to recommendations to the European Commission and the IAEA for the revision of the Euratom and international Basic Safety Standards. The National Contact Points will be asked to discuss these proposals within their countries in order to present a national viewpoint at the workshop. The NCPs will also be asked to assess the impact of the proposals on their country's radiation protection E&T infrastructure. So indeed, we are facing a very interesting second part of the EUTERP project.

You will find in this issue also the first announcement of the second EUTERP Workshop, as well as a preliminary programme. As you will see in the announcement, we are now also addressing the radiation worker in the programme. The Steering Committee had the difficult task to decide about two interesting offers to host the meeting (Vilnius and Ankara). Although it was tempting to go to another country, the Committee decided finally to go back to Vilnius but it wants to express its appreciation for the willingness of TAEK to host the workshop.
As you will see, this issue of the Newsletter also includes contributions from Romania and the Netherlands. This is important, as the EUTERP Newsletter is one of the means of communication between the members and I would like to invite all of you to contribute to next issues of the Newsletter. Both contributions, although very different in nature, show that the National Contact Points (NCPs) are active in implementing the Platform in their countries, which is an important step to reaching sustainability. Not all countries have been appointing a NCP yet. You can see the updated list in this Newsletter and on the EUTERP website. I would like to ask the missing countries to appoint a NCP as soon as possible.
The EUTERP website also contains a page with training events. I would like to invite you to add your training events in the folder on EUTERP website.
I hope this Newsletter inspires you to contribute to the important work of the Platform that is ahead of us. More copies of the Newsletters can be downloaded from the website www.euterp.eu.

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Education and training in the revision of basic safety standards directive and recast of radiation protection legislation

Reasons for revision of Basic Safety Standards Directive and recast of EURATOM radiation protection legislation

The current Basic Safety Standards Directive 96/29/EURATOM (the BSS) introduced in 1996 some new features in order to meet the needs prevailing at that time. A specific Title VII was introduced for the regulatory control of work activities involving natural radiation sources. With the exception of aircrew exposure, the BSS left the responsibility for the identification of NORM industries and of workplaces with high radon concentrations with national authorities. The concepts of exemption and clearance were introduced, but it was up to Member States to establish clearance levels, allowing for the general criteria (e.g., individual doses less than about 10 μSv) and Community guidance. In Title IX on intervention situations, Member States were required to seek cooperation in order to cope with trans-boundary nuclear accidents or radiological emergencies, but there was no translation of this requirement into legal or operational terms. This flexibility was needed in order to achieve consensus on the inclusion of these new features at a time when there was little experience with such matters, so that it was difficult to judge their impact and regulatory burden.

In the field of education and training (E&T) the BSS established general requirements for training, experience and recognition of qualified experts. In spite of clarifications given in the

Communication concerning the implementation of the BSS, based on different historically grown E&T systems and different interpretation of the definition of the QE, Member States transposed and implemented education and training arrangements differently. The experience gathered since 1996 with transposition in national legislation (due by May 2000) and with operational implementation demonstrated a need for enhanced harmonisation.

On the other hand in March 2007, the ICRP approved revised Recommendations for a System of Radiological Protection which will replace the *Publication 60* issued in 1991. These revised recommendations consolidate and develop the previous recommendations and guidance. The revision of the BSS will take account of the forthcoming new ICRP recommendations. While these do not necessarily require major changes in regulatory requirements, we believe they offer a much more coherent and understandable framework.

In the context of the Commission's Better Regulation strategy, simplification and improvement of existing legislation has become an important issue. In the radiation protection area, in the course of 50 years of implementation of Chapter 3 (Health and Safety) of the EURATOM Treaty, an important step towards simplification of this "*acquis*" would be to recast (amend and bring together several legal acts in one piece of legislation) radiation protection Directives - the BSS, the Medical Directive 97/43/EURATOM, the Directives on outside workers and on informing the public with regard to radiological emergencies, and the Directive on high-activity sealed sources and orphan sources (Council Directive 90/641, 89/618, 2003/122 respectively). This consolidation will promote the coherence of definitions and requirements in all Directives and the association of specific and general requirements and should lead to a more effective legislation.

Education and training in the revision process

In 2002 a survey has been carried out on behalf of the European Commission on the situation of the radiation protection experts in the Member States. Some difficulties in the implementation of the BSS concept of the "Qualified expert" have been identified through this survey. In fact different definitions and status of qualified experts were established and there is variety in the structure and scope of training and education offered in Member States. This may create obstacles to free movement of services within the EU. In order to address the problem and also to promote further harmonization in this area the Commission has established the EUTERP Platform. One of the main objectives of the Platform is to remove obstacles for the mobility of radiation protection experts within the European Union through harmonisation of definitions, job descriptions and qualifications of the radiation protection expert and creating a base for mutual recognition of such experts. The results, obtained through this project, may lead to further legislative action at EU level.

According to the provisional overall structure of the BSS recast, a separate title is devoted to education and training. The objective is to improve and enrich, if necessary, the current BSS requirements for education and training and to consolidate education and training provisions from all radiation protection directives included in the recast. In this respect a valuable input is expected from the EUTERP Platform especially for elaboration of clear definitions of radiation protection expert, radiation protection officer (and other if needed) and setting clear criteria for training and qualifications of these professionals.

State of revision process

The Community's Group of Experts has established a work programme for the revision of the BSS. It follows a topical approach, leaving the actual drafting of the Basic Safety Standards at the end. Working Parties have been established to take on board the redrafting of requirements on exemption and clearance, on natural radiation sources, and on a graded approach to regulatory control. Further work will be undertaken on occupational exposure (including outside workers) and on emergency preparedness.

By the end of 2007 we plan to have a full outline of the structure of the new BSS and of the prospects for consolidation with other Directives. The finalisation of a proposal for adoption by the Commission is scheduled by the end of 2008. Adoption of the Commission's proposal by the Council may take another few years. Meanwhile, the Commission will closely follow up the revision of the Inter-Agency Basic Safety Standards. The aim is to harmonise as far as possible the definitions and requirements, basing them on the ICRP recommendations.

Stefan Mundigl; European Commission, D.-G. TREN, Unit H4

Comments on the summary and recommendations of the 1st EUTERP workshop

On behalf of the Dutch members of the EUTERP Platform we would like to respond to the summary and recommendations of the 1st EUTERP workshop. The opinions given below are shared by the Netherlands Society for Radiological Protection (NVS) and the association of Dutch providers of training and education in the field of radiation protection.

We would like to express our great appreciation for the work that has been done during this workshop, in particular by the organizers of the workshop. It is our hope that EUTERP will develop in the forthcoming years towards a self-sustainable platform that facilitates mutual recognition of radiation workers, radiation protection officers and radiation protection experts and contributes to the harmonization of the qualifications for their education and training.

The summary and recommendations give an adequate survey of the achievements of the workshop. We are particularly impressed by the first draft for a standardized methodology for mutual recognition of radiation protection professionals based on a profile consisting of core elements like duties, education and work experience.

We regret the fact that the category of radiation workers was addressed only marginally. It should be noted that the number of radiation workers crossing borders within the European Union is by far the largest group of people involved. In our opinion, it is therefore this group for which solving the 'problem' of mutual recognition is most urgent. We thus do not support the choice of the organization to address the group of radiation workers at a later stage. Moreover, as pointed out already during the concluding session of the workshop, the absence of any reference to the radiation worker in the recommendations is felt as a major omission. It is for example our firm believe that the methodology we referred to above can be made suitable for radiation workers in spite of the large existing variety in their responsibilities and/or qualifications. We therefore urge the EUTERP Platform to adjust its working program for the next workshop accordingly,

especially when complying with recommendation 7 'Methodology of assessing recognition'.

In the report on the discussion in Working Group 4 it is observed that the use of a standardized or reference syllabus is assumed to be a first step towards harmonization. It was however pointed out during both the discussions in Working Group 4 and the concluding session of the workshop that the compulsory use of a standardized syllabus itself should not be an objective in the process of harmonization. Rather should the objectives of education and training (material) be established uniformly. Although the availability of standardized syllabi might be of great help to education and training providers, from our point of view they must be free to develop their own material as long as their education or training schemes fulfil the requirements set by the mutually recognized objectives. Unfortunately this aspect has disappeared from both the summary and recommendations of the workshop.

In the coming period we will gather in the Netherlands to elaborate recommendation 8 of the first workshop, 'Work programme for the EUTERP Platform', taking into account our own comments. We are looking forward to fruitful discussions during the second workshop of the platform in 2008!

Ton Vermeulen (National Contact Point); Ministry of Social Affairs and Employment
Hielke Freerk Boersma; University of Groningen

IRPA Definition of Radiation Protection Expert (RPE)

The International Labour Organization (ILO) has established in 1957 the first International Standard Classification of Occupations (ISCO-58). This classification was later on superseded by ISCO-68 and then by ISCO-88, the actual version. ISCO is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. It is intended both for statistical users and for client oriented applications, such as management of migration of workers between countries as well as development of vocational training programmes and guidance. Until now, no occupation in the field of radiation protection is registered by ISCO. The IRPA Executive Council has taken the initiative to propose the registration of the Radiation Protection Expert (RPE) in the upcoming version ISCO-08, to be published early 2008. ILO has included in the actual ISCO-08 draft a new Unit Group in which the RPE is given as an example of registered occupations:

Draft ISCO-08: Unit Group 2263

Environmental and occupational health and hygiene professionals

Environmental and occupational health and hygiene professionals evaluate work and other environments and develop and implement programs to monitor environmental health and occupational health and safety, to ensure safe and healthy working conditions, and prevent disease or injury caused by chemical, physical, radiological and biological agents or ergonomic factors.

Examples of the occupations classified here

- *Environmental Health Officer*
- *Occupational Health and Safety Adviser*
- *Occupational Hygienist*
- ***Radiation Protection Expert (RPE)***

In context with the ISCO classification of the RPE the IRPA Executive Council has elaborated the following definition:

(A) "Radiation Protection" is that science and art devoted to the anticipation, recognition, evaluation, and control of radiation hazards that may cause impaired health and well-being, or injury among workers, patients, the public, or harm to the environment.

(B) "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

1. anticipate and recognize the interactions of radiation with matter and to understand the effects of radiation on people, animals and the environment;
2. 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;
3. 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.

(C) In most countries the competence of radiation protection experts needs to be recognized by the competent authority in order for these professionals to be eligible to undertake certain defined radiation protection responsibilities. The process of recognition may involve formal certification, accreditation, registration, etc.

Christian Wernli; IRPA Executive Council

Review of the definitions of the qualified expert, the medical physics expert and the radiation protection officer (Draft text for discussion)

Introduction

Recent reviews of the implementation of the EU BSS qualified expert (QE) requirement in EU Member States have shown that there is considerable confusion over the nature of the role, the required level in terms of expertise, and the required functions of the QE. The First EUTERP Workshop, held in Vilnius in May 2007, concluded that priority should be given to the production of a revised definition that gives greater clarity. There is also debate over the role of the Medical Physics Expert (MPE) and the overlap between the roles of the MPE and QE.

The Workshop concluded that a revised EU BSS should also include a definition of the Radiation Protection Officer (RPO). This role is currently not defined or referred to in the EU BSS, although it is defined in the IAEA BSS. Most EU member states incorporate RPOs into their radiation protection arrangements, but again there is considerable variation in interpretation over the relative roles of the RPO and QE.

This paper considers the current definitions of the QE, MPE, and RPO and proposes guidance on their roles and duties.

Qualified Epert (QE)

Current EU BSS definition

Persons having the knowledge and training needed to carry out physical, technical or radiochemical tests enabling doses to be assessed, and to give advice in order to ensure effective protection of individuals and the correct operation of protective equipment, whose capacity to act as a qualified expert is recognised by the competent authorities. A qualified expert may be assigned the technical responsibility for the tasks of radiation protection of workers and members of the public.

Current IAEA definition

An individual who, by virtue of certification by appropriate boards or societies, professional licenses or academic qualifications and experience, is duly recognised as having expertise in a relevant field of specialization, e.g. medical physics, radiation protection, occupational health, fire safety, quality assurance or any relevant engineering or safety speciality.

The EUTERP Steering Committee subsequently considered the role and functions of the Qualified Expert and concluded that the revised BSS could usefully incorporate a clear definition, while further guidance could be provided in a Communication. It also felt that the term 'Qualified Expert' was misleading and, for the purposes of the EU BSS, could be replaced by the more descriptive expression 'Radiation Protection Expert'. Revised definition and guidance is given below. This takes into account both the draft IRPA definition of the Radiological Protection Expert and the perceived role of the RPE as discussed in the EUTERP Workshop.

Proposed EU BSS Definition - Radiation Protection Expert (RPE)

Persons having the knowledge, training and experience needed to give radiation protection advice in order to ensure effective protection of individuals, whose capacity to act as a radiation protection expert is recognised by the competent authorities.

Proposed EU guidance

A radiation protection expert will have:

- an education to Bachelor degree level in radiation protection or a closely related physical or biological science, or an equivalent qualification or level of experience; and
- acquired competence in radiation protection, by virtue of a combination of special studies, training and practical experience.

Role

The role of the radiation protection expert (RPE) is to provide comprehensive, professional advice to users of radiation on a wide range of radiation protection matters, including the protection measures needed to restrict exposure. In addition to a detailed knowledge of radiation protection, the radiation protection expert must also have a thorough understanding of the relevant national legislation.

The RPE's role is to advise an employer; therefore whilst an RPE may be an employee of the employer, their advice should be independent from production and operational management. Alternatively, an RPE may be an external consultant who is contractually appointed to provide advice to an employer. The role of the RPE is very different to that of the radiation protection officer (RPO) and will involve the occasional provision of advice as required by the employer. There is no requirement for the RPE to be present or available at all times and the RPE would not necessarily be involved in the routine radiation protection arrangements e.g. supervision, radiation monitoring.

Duties

The primary duty of the RPE is to provide the employer with professional advice to users of radiation on a wide range of radiation protection matters. This will include advice on:

a) plans for new installations and the acceptance into service of new or modified sources of ionising radiation in relation to any engineering controls, design features, safety features and warning devices provided to restrict exposure to ionising radiation;
b) the classification of controlled and supervised areas;
c) the classification of workers;
d) the content of area and personal monitoring programmes;
e) the appropriate radiation monitoring instrumentation to be used;
f) the appropriate methods of personal dosimetry;
g) the adequacy of current arrangements to restrict exposure;
h) radioactive waste disposal requirements.

The RPE may also be asked to provide other radiation protection services in association with the advice provided. These may include:

a) drafting the radiation protection policy of the registrant or licensee, and the programme to restrict exposure;
b) interpreting radiation protection information e.g. manufacturers' data, the output from monitoring programmes, and provide recommendations to the employer on actions to take;
c) providing a report to the Director, covering the radiation protection arrangements and standards achieved.

Competence

The RPE will need to have a high level of knowledge, experience and ability (i.e. competence) to be able to satisfactorily perform the duties described above. The RPE must have the ability to:

a) anticipate and recognise the interactions of radiation with matter and to understand the effects of radiation on people, animals and the environment;
b) carry out a risk assessment: identify and assess risks of actual and potential exposure to ionizing radiation, including the calculation of potential exposure;
c) interpret regulatory requirements and provide practical situations for compliance;
d) identify and propose appropriate control procedures to restrict radiation exposure, in accordance with the principles of optimisation;
e) interpret and apply radiation protection data (e.g. radionuclide decay and emission data, source outputs, dose histories, workplace monitoring results, manufacturer's data, shielding data).

In addition to scientific and technical competence, it is very important that the RPE has the ability to communicate effectively

with a wide range of persons and has a good understanding of the social and environmental considerations associated with different radiation practices.

Member States must have a formal recognition system in place for the recognition of RPEs. Guidance on the recognition process is given in another article in this Newsletter.

Radiation Protection Officer (RPO)

Current IAEA definition
An individual technically competent in radiation protection matters relevant for a given type of practice who is designated by the registrant or licensee to oversee the application of the requirements of the Standards.

This EUTERP Steering Committee felt that this definition would be suitable for use in a revised EU BSS with the addition of a requirement for the competent authorities to recognise RPOs.

Proposed EU BSS definition
An individual technically competent in radiation protection matters relevant for a given type of practice who is designated by the registrant or licensee to oversee the application of the requirements of the Standards, whose capacity to act as a radiation protection officer is recognised by the competent authorities.

Proposed EU Guidance
The RPO is generally designated from among those persons that work in the practice, and is in a suitable management position to oversee the radiation work. The RPO must have received sufficient training and experience to be able to fulfil the required functions for the given type of practice.

The primary function of the RPO is to oversee the application of the relevant legislative requirements and ensure that the work is carried out safely. The specific duties of the RPO will depend on the nature of the practice, but 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) overseeing the programme of workplace monitoring;
c) maintaining adequate records of radioactive sources held by the practice;
d) carrying out periodic assessments of the condition of the relevant safety and warning systems;
e) overseeing the personal monitoring programme;
f) overseeing the health surveillance programme;
g) liaison with the radiation protection expert;
h) give new employees an introduction in local rules and procedures;
i) give advice and comments on work plans;
j) authorise work plans;
h) provide reports to the local management.

It should be noted that, while the RPO may have some management responsibility for radiation protection, the primary responsibility remains with the registrant or licensee.
R A Paynter HPA-RP

The Recognition of Radiation Protection Experts

(Draft text for discussion)

Introduction

The Euratom Basic Safety Standards Directive requires radiation protection experts (RPEs) to be involved in specified tasks and additionally requires Member States to recognize 'the capacity to act' of such experts. The purpose of the recognition requirement is to give employers confidence that any person recognized as an RPE has core competence in giving advice in a wide range of radiation protection scenarios.

Being a recognized RPE does not, of itself, make the holder a suitable RPE for a particular employer to consult. It is only recognition of core competence to give advice as an RPE. Inevitably, in some very complex or specialized practices RPEs will also need to have detailed understanding of the practice before they are in a position to provide authoritative advice. Employers will need to satisfy themselves that the individual RPE they appoint also possesses the specific knowledge and experience required for giving advice on their particular working conditions or circumstances i.e. are suitable for their practice.

Criteria of core competence for radiation protection experts

A recognition scheme should specify criteria for core competence and assess an applicant against that specified criteria. Satisfactory demonstration of attainment of the criteria will provide sufficient evidence to demonstrate core competence to act as an RPE. The following sections give the recommended criteria for the assessment of core competence.

Education
An education to Bachelor degree level in radiation protection or a closely related physical or biological science, or an equivalent qualification or level of experience.

Training

- Knowledge and understanding of each topic specified in the Basic Syllabus (an updated version of the syllabus for QEs given in Communication 98/C 133/03);
- Knowledge of operational radiation protection methods, especially:
- interpretation and application of radiation protection data;
- work supervision; radiological measurements;
- control procedures for work involving the potential for significant radiation exposure;
- The ability to give adequate advice to duty holders.

Evidence provided to demonstrate knowledge of the topics in the basic syllabus and knowledge of operational methods could include:

(i) the applicant's degree, postgraduate study, professional training courses, certificated study or other local training events; and/or
(ii) details of the applicant's work experience. This evidence could be in the form of a resume of the applicant's work history and would detail the positions held and relevant work experience, clearly highlighting those aspects that demonstrate the necessary knowledge for each relevant topic.

Practical competency
In addition to course based knowledge, evidence of practical

competency is necessary for those topics where advice will be required in most practices. Such evidence should normally be from a workplace environment. Five main topics are given in the table, together with the elements of competence required in those topics.

Re-certification

The recognition body should issue a dated and numbered certificate to each applicant who successfully satisfies the recognition criteria. It is recommended that this certification lasts for 5 years, at which time the RPE will have to apply for recertification. The recertification process should focus on the RPEs professional development over the 5 year period, and RPEs will need to provide satisfactory evidence that they have kept up to date with relevant legislative changes and technical developments.

Topic	Elements of competence required of an RPE
1. Legislation	1.1 A thorough understanding of the national regulatory requirements, and the practical measures for compliance with those regulations. 1.2 The ability to interpret regulatory requirements in practical situations.
2. Hazard and risk assessment	2.1 Understanding the principles of hazard and risk assessment and their practical application to ionising radiation. 2.2 The ability to identify and assess risks of actual and potential exposure to ionising radiation, including the calculation of projected exposure.
3. Optimisation	3.1 The ability to identify and propose appropriate control procedures to restrict radiation exposure, in accordance with the principles of ALARA. 3.2 The ability to interpret and apply radiation protection data (e.g. radionuclide decay and emission data, source outputs, dose histories, workplace monitoring results, manufacturers' data, shielding calculations).
4. Monitoring: area and personal dosimetry	4.1 A practical understanding of: (i) the measurement of radiation dose and dose rate; and (ii) the measurement and assessment of radioactive contamination. 4.2 The ability to interpret radiation and contamination measurements in order to identify necessary control procedures. 4.3 The ability to interpret personal dosimetry data in order to identify necessary control procedures.
5. Classification of areas and workers	5.1 The ability to identify the need for area classification as supervised or controlled. 5.2 The ability to identify appropriate access control measures for classified areas. 5.3 The ability to identify the need for classification and personal monitoring of workers.

R. Paynter; HPA-RP

List of National Contact Points

Country	National Contact Point	Affiliation
Austria	Th. Geringer	ARC Seibersdorf
Belarus	A. Timoshchenko	International Sakharov Environmental University
Belgium	L. van Bladel	Federal Agency for Nuclear Control
	P. Kockerols	Belgian Association for Radiological Protection
Czech Republic	H. Podskubkova	State Office for Nuclear Safety (SUJB)
Denmark	K. Ulbak	National Institute of Radiation Protection
Estonia	M. Lust	Radiation Protection Centre
Finland	R. Havukainen	STUK
France	Th. Lahaye	Ministry of Labour
Greece	P. Dimitriou	GAEC
Italy	A. Luciani	ENEA
	G. Cucchi	General Secretary of ANPEQ
Hungary	S. Pellet	National Research Institute for Radiobiology and Radiohygiene
Kazakhstan	I. Khvoshnyanskaya	Radiation Protection and Ecology Center
Latvia	M. Caikovska	Ministry of Environment; Radiation Safety Centre
Lithuania	J. Karpenko	Radiation Protection Centre
Luxembourg	N. Harpes	Ministry of Health
Macedonia	G. Angelovski	Radiation Safety Directorate
Malta	P. Brejza	Radiation Protection Board
Netherlands	A. Vermeulen	Ministry of Social Affairs and Employment
Norway	T. Wøhni	National Radiation Protection Authority
Poland	P. Krajewski	Central Laboratory for Radiological Protection
Portugal	C. Oliveira	Nuclear and Technological Institute
Romania	M. Ceclan	Politechnic University of Bucharest
	V. Zsombori	National Commission for Nuclear Activities Control
Spain	M. Marco	CIEMAT
Sweden	B. Ekström	SSI
Switzerland	S.-G. Jahn	Swiss Federal Nuclear Safety Inspectorate
United Kingdom	R. Paynter	HPA-RPD

Last update: 7 September 2007

Public understanding and acceptance of nuclear in Romania and the Romanian education and training system in RP

Public understanding and acceptance

The growth of the nuclear power option is impeded in many countries by public concerns over the safety and environmental consequences of producing electricity by means of nuclear reactors. Historically, the main components of this public concern have been the potential for serious nuclear reactor accidents, the day-to-day operational safety of nuclear reactors, the association in the public's mind between nuclear power and nuclear weapons, and the question of what to do with radioactive waste. Scientists and engineers working on the technical aspects of nuclear reactor operation and radioactive waste disposal have developed an international consensus that the reactors can be operated safely and the waste can be permanently managed in a manner that protects the environment and public health. However, this view is not necessarily shared by the general public [1].

The paper aims at presenting the efforts made in the last two years for modernizing of the Romanian E&T system in radiation protection (RP). Increasing the responsiveness capacity in emergency situations is an important element for public acceptance and confidence building in Romania on nuclear power technology. The responsiveness capacity in emergency situations is a product of the Romanian education and training system in Radiation Protection (RP).

How to get Public Acceptance?

Many countries, utilities and industry associations have implemented public interaction programs, the intent of which is to develop the degree of public understanding necessary to allow their nuclear power programs to be implemented and to expand as required [2,3]. Such exhaustive public interaction programs, are an urgent need for Romania, and encompass activities that range from simply giving the public information to involving members of the public or special interest groups in the decision-making process. Steps can also be taken to increase public trust in nuclear power technology used in Romania that can be safely operated. Moreover, Romanian nuclear technology allows, in the event of an accident, to take actions to return to normal. The responsiveness capacity in emergency situations is linked to the Romanian education and training system in Radiation Protection (RP). Such steps will usually involve much more open decision-making, and a responsiveness to public concerns that goes far beyond technical and economic optimization.

A step forward to increase public trust on Romanian education and training system in Radiation Protection

The efforts made in the last two years for modernizing of the Romanian E&T system in RP [4,5,6] led to increasing the responsiveness capacity in emergency situations. Increasing the responsiveness capacity in emergency situations is an important element for public acceptance and confidence building on the Romanian nuclear power technology but this is a less end process. Since January 1st 2007, Romania became EU member but Romania's EU integration process still continues for several years. Romania's EU integration priorities are not only to transform the economy radically, but also to modernize its E&T system in general and in Radiation Protection (RP) in particular.

Modernizing of Romanian education and training system in RP by European co-operation

The modernization of the Romanian education and training system in RP is a real concern, related to the National Nuclear Programme (NPP) which foresees the commissioning of unit 2 in 2007 and the completion of units 3 and 4 from NPP Cernavoda until 2015. The natural way of modernizing the Romanian education and training system in RP is the co-operation with the EUTERP Platform. The Romanian participants into the EUTERP Platform integrate the Romanian branch of EUTERP Platform, called ROmanian Training and Education in Radiation Protection Platform (RO_TERP Platform). The RO_TERP Platform serves as a network, aiming to improve the co-operation between the various Romanian stakeholders in the field of radiation protection training and education: the national competent radiation protection authority - CNCAN; the national bodies responsible for professional education and vocational training - MEdC; providers of training and education in the radiation protection area-universities and training centers; and professional organizations representing the receivers of training and education - AREN (Romanian Association Nuclear Energy) and ROMATOM (Romanian Nuclear Industry Association).

In order to accommodate the input of all categories at the Romanian level, two Romanian structural contacts between all RO_TERP Platform participants were established, the so called National Contacts Points (NCP). The two Romanian NCPs could serve as outposts for the RO_TERP Platform. They carry out coordinating tasks on a Romanian level as input for the EUTERP Platform. It was concluded that this is a prerequisite for reaching a sustainable and self-supporting RO_TERP Platform after a certain period of time. The RO_TERP Platform is a promising tool for modernizing and EU harmonizing of the Romanian education and training system in RP. Acting as an incorporated part of EUTERP Platform which leads the European RP field, the RO_TERP Platform will help to improve the E&T system in RP, and in this way the responsiveness capacity in emergency situations is adequately increasing as well.

Conclusions

The efforts made in the last two years for modernizing of the Romanian E&T system in radiation protection (RP) led to increasing the responsiveness capacity in emergency situations. Increasing the responsiveness capacity in emergency situations is an important element for public acceptance and confidence building on Romanian nuclear power technology but this is a less end process. The natural way of Modernizing the Romanian education and training system in RP is the co-operation with EUropean Training and Education in Radiation Protection (EUTERP) Platform. The Romanian participants into the EUTERP Platform integrate the Romanian branch of EUTERP Platform, called ROmanian Training and Education in Radiation Protection Platform (RO_TERP Platform). The RO_TERP Platform serves as a network, aiming to improve the co-operation between the various Romanian stakeholders in the field of radiation protection training and education. The RO_TERP Platform is a promising tool for modernizing and European harmonizing of Romanian education and training system in RP. The RO_TERP Platform will help to improve the E&T system in RP, and in this way the responsiveness capacity in emergency situations is adequately increasing as well.

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Training events

Training Course on
OCCUPATIONAL RADIATION PROTECTION: SPECIFICITIES OF WASTE MANAGEMENT AND DECOMMISSIONING;
10 to 14 December 2007 and

ON-THE-JOB TRAINING
17 to 21 December 2007

The course has been developed by the ENETRAP Project and the Center for Advanced Technological and Environmental Training, Forschungszentrum Karlsruhe.

Deadline for registration: ***As soon as possible***

Venue: The training course will take place at Fortbildungszentrum für Technik und Umwelt (FTU), Forschungszentrum Karlsruhe. It will be held in English.

Information and Registration:
Sibylle Mann
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Forschungszentrum Karlsruhe GmbH/FTU
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Further information is also available at www.euterp.eu.

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EUTERP Workshop

European Training and Education in Radiation Protection Platform

Second EUTERP Platform Workshop

"Definitions, Qualifications and Requirements for Radiation Protection Experts, Radiation Protection Officers and Radiation Workers"

Hotel and conference Centre Karolina

Sausio 13 street 2, Vilnius, Lithuania

23 – 25 April 2008

Objective

The second workshop of the EUTERP Platform will be dedicated to the progress that has been made on the follow-up and implementation of the recommendations made at the first workshop (Vilnius, 22-24 May 2007). In particular, it aims to:

- discuss the proposed definitions of Radiation Protection Experts (RPEs) and Radiation Protection Officers (RPOs) in the revised International and Euratom Basic Safety Standards;
- ind a common denominator for international agreement on the qualifications for training and education of RPEs, RPOs and Radiation Workers (RWs);
- discuss the roles, duties and responsibilities of the RPEs and RPOs
- discuss the role of the RPE in relation of the Medical Physics Expert (MPE);
- elaborate the requirements for mutual recognition of RPEs and RPOs;
- assess the impact of the proposed changes for the various countries.

Scope of the Workshop

The workshop programme will include the following subjects:

1. An update of the process of revision of the Directive 96/29/EURATOM and the International Basic Safety Standards.
2. National views on the proposals for definitions and competence requirements for RPEs, RPOs, as well as their roles, duties and responsibilities.
3. Requirements for training and education of RWs.
4. National views on the impacts of the implementation of the proposals.

Expected outcome

The workshop aims at providing recommendations to the European Commission for international agreement on the qualifications for training and education and requirements for mutual recognition of RPEs, RPOs and RWs.

Target Audience

All concerned stakeholders in radiation protection training and education are invited to participate, such as:

- National competent radiation protection authorities;
- National bodies responsible for professional education and vocational training;
- Providers of training and education in the radiation protection area;
- Professional organisations representing the receivers of training and education;
- International organisations and associations;
- Operators and employers.

The number of participants will be restricted to a maximum of 100. A selection will be performed if applications exceed the participant limit.

Contributions from national contact points

National contact points are invited to submit a paper, which should be focussed on the national positions with respect to the second, third and fourth subject, as mentioned above in the Scope of the Workshop, and taking into account the national infrastructure with regard to training and education in radiation protection. The paper should also present the national views on what is considered to be the best approach to reach optimal harmonisation of E&T requirements for RPEs, RPOs and RWs in the various sectors of work, such as the nuclear sector, the medical sector, research, industry, natural sources, etc.

An abstract of the paper, of no more than 1 page, should be sent to the coordinator of the Platform (vandersteen@nrg-nl.com) **before 31 January 2008.** The Steering Committee will evaluate the contributions and decide if they are presented orally or as a poster. The authors will be informed about the decision of the Steering Committee on **15 March 2008** at the latest.

Working Groups

As was the case in the first workshop, four working groups will be formed which will address the following topics:

- What are the core competences for the RPE and what are the commonalities and the differences between the competences and qualifications of the MPE?
- What are the core competences for the RPO and what are the commonalities and the differences between the core competences of the RPE?
- What are the important elements for the qualification of Radiation Workers?
- What are the impacts of the draft definitions and requirements for qualification?

Fee

The attendance fee will be 225 €, which includes documentation,

coffee, lunches, a reception buffet and 3 nights accommodation (22-25 April 2008) in a single room. Double rooms are available for 9 € extra per night, to be paid directly to the hotel.

Sight seeing

When there is sufficient interest, a sight seeing bus tour will be organized after the workshop (10 € p.p.; duration 3 hours).

Registration

Complete the registration form for the workshop on the EUTERP website (www.euterp.eu).

Programme

Day 1

08:00Registration / Poster installation

Session 1: Setting the scene
09:00Welcome addresses
09:10Introduction, objectives, outcome and work programme of the workshop

Session 2: International activities

09:25	Training and education activities of IAEA
09:35	Definition, competences and qualifications of the MPE
09:45	The ENETRAP Training Scheme and the European Master Course on Radiation Protection
09:55	E&T requirements for Radiation Workers
10:10	The EU Directive on Recognized Professions and its implications for the RPE and RPO
10:25	Update of the revision of the Directive 96/29/Euratom, focussing on proposals for definitions, requirements on qualifications, competence and recognition
10:40	Update of the revision of the International BSS, focussing on proposals for definitions, requirements on qualifications, competence and recognition
11:00	Discussion
11:15	Coffee break / Poster viewing

Session 3: National views on:
Definitions and requirements on qualifications, competence and recognition; Roles, duties and responsibilities
Impact of the proposals

11:45	country presentations
12.45	Lunch
14:15	4 country presentations
15:15	Coffee break / Poster viewing
15:45	4 country presentations
16:45	Summary of posters
17:05	Summary of oral presentations
17:25	Discussion
18:00	End of day 1
19:00	Buffet

Day 2

Session 4: Discussion on programmatic issues

09:00	Introduction of Working Groups
09:15	Working Groups
11:00	Coffee break
11:30	Working Groups
12:30	Lunch
14:00	Intermediate Reports of WGs
15:30	Coffee break
16:00	Working Groups
17:00	Final Reports of WGs
17:45	Discussion
18:15	End of Day 2

Day 3

Session 5: Results of the workshop

09:00	Conclusions and recommendations
11:00	Coffee break
11:30	Identification of issues for next year's work programme
11:45	Date and place of next workshop
12:00	Closure