Development of European reference training schemes for radiation protection experts and officers

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ENETRAP II
Today’s situation

- Increased attention for RP: “nuclear renaissance”, more technologies (and more frequently used) rely on radioactivity (in nuclear, non-nuclear and medical sector)
- Absolutely necessary: protection of men and environment, guarantee safe working conditions
- Need for human resources with knowledge of radiation protection science, and necessary competences, skills and appropriate attitudes on the workfloor
- ENETRAP II supports young students and professionals in their need to gain and maintain high level radiation protection knowledge, competences and skills
- By developing good infrastructure for education and training
Development of E&T activities

- **Harmonized approach**
  - Reducing differences; finding a common basis for E&T
  - Mutual recognition of RP courses (and providers)
  - Clear and uniform terminology on professions in RP
  - Mutual recognition of acquired competences of RPE, RPO, workers

  will facilitate the development of a common RP (and safety) culture and the mobility of workers

- **Legal framework**
  - Communication 98/C 133/03, concerning its implementation
ENETRAP / EUTERP Advisory role in revision of European BSS

Proposed new definition for RPE, RPO:

**RPE** “an individual having the knowledge, training and experience needed to give radiation protection advice in order to ensure effective protection of individuals, whose capacity to act is recognised by the competent authorities”

**RPO** “an individual technically competent in radiation protection of matters relevant for a given type of practice who is designated by the undertaking to oversee the implementation of the radiation protection arrangements of the undertaking”
ENETRAP II - European Network for Education and Training in Radiation Protection; part II

Submitted for 7FP, Theme: Fission-2008-5.1.1, Euratom Fission Training Schemes (EFTS) in all areas of Nuclear Fission and Radiation Protection; coordination action

EC contribution 800 000 EUR, equal contribution from partners

March 2009 – March 2012
Overall objective

to develop European high-quality "reference standards" and good practices for E&T in radiation protection, specifically with respect to the RPE and the RPO.

These "standards" will reflect the needs of the RPE and the RPO in all sectors where ionising radiation is applied (nuclear industry, medical sector, research, non-nuclear industry).

The introduction of a radiation protection “training passport” as a mean to facilitate efficient and transparent European mutual recognition is another ultimate deliverable of this project.
Specific objectives

- Develop the European reference standards for RPE and RPO training and based on that develop training scheme (ERPTS);
  - Specific attention to topics, including “non-technical/soft skills”, OJT/WE, ...
- Develop and apply a mechanism for the evaluation of training material, courses (and providers);
- Establish a recognised and sustainable "quality label" for training events;
- Create a database of training events and training providers;
- Bring together national initiatives to attract early-stage radiation protection researchers on a European level;
- Develop some course material examples (including e-learning);
- Organise pilot sessions of specific modules of the ERPTS and monitor the effectiveness according to a developed system;
- Development of a European passport for CPD in RP.
WP1  Co-ordination of the project
WP2  Define requirements and methodology for recognition of RPEs
WP3  Define requirements for RPO competencies and establish guidance for appropriate RPO training
WP4  Establish the reference standard for RPE training
WP5  Development and apply mechanisms for the evaluation of training material, events and providers
WP6  Create a database of training events and training providers (including OJT) conforming to the agreed standard
WP7  Develop of some course material examples (text book, e-learning modules, …)
WP8  Organise pilot sessions, test proposed methodologies and monitor the training scheme effectiveness
WP9  Introduction of the training passport and mutual recognition system of RPEs
WP10 Collaboration for building new innovative generations of specialists in radiation protection
WP 1 Co-ordination

WP 2 Requirements and methodology for recognition of RPEs

WP 3 Requirements and reference standards for RPO training

WP 4 Establish the reference standards for RPE training

WP 5 Mechanism for the evaluation of training materials, events and providers

WP 6 Database of training events conforming to the agreed standard

WP 7 Development of course material (text book, e-learning)

WP 8 Pilot sessions – Test methodologies and effectiveness

WP 9 Introduction of the training passport and mutual recognition system of RPEs

WP 10 Collaboration for building new innovative generations of specialists in radiation protection

Steering Committee

Advisory Board
The composition of the Advisory Board is such that all relevant stakeholders, with respect to the stated aim of the project, are represented, i.e. regulatory authorities, international organisations, professional organisations, training providers, research institutes, medicine and industry.

The Advisory Board will advise about the best balance between supply and needs of training, thereby ensuring stable feedback mechanisms to the Steering Committee.

Potential members of the Advisory Board: EUTERP, HLEG (MELODI), IAEA, EFOMP, OECD, IRPA, the regulatory bodies, Art 31 Expert Group, industry, ...
will be instrumental for the cooperation between regulators, training providers and customers (nuclear industry, medical sector, research and non-nuclear industry) in reaching harmonization of the requirements for, and the education and training of, RPEs and RPOs within Europe, and will stimulate building competence and career development in radiation protection to meet the demands of the future.
First results

- Develop the European reference standards for RPE and RPO training and based on that develop training scheme (ERPTS)
  - Done for RPE; RPO in progress
  - Based on ENETRAP training scheme: modular, common basis and optional modules depending on type of application

- Organise pilot sessions of specific modules of the ERPTS and monitor the effectiveness according to a developed system

- Develop some course material examples (including e-learning)
Common Basis

Module 1: Basis
  KIT Karlsruhe, Germany
  14-18/03/2011

Module 2: Foundation 1
  KIT Karlsruhe, Germany
  21-25/03/2011

Module 3: Foundation 2
  (Occupational)
  KIT Karlsruhe, Germany
  28-30/03/2011

Optional Modules

Module 4: NPP and Research Reactors
  KIT Karlsruhe, Germany
  04-08/04/2011

Module 5: Waste Management
  (June 2008)

Module 6: Unsealed Sources, Research and Non-Nuclear
  KIT Karlsruhe, Germany
  30/03-01/04/2011

Module 7: Medical Domain
  ITN Lisbon, Portugal
  not yet defined

Module 8: NORM
  NRG Petten, Netherland
  23-26/05/2011
  HPA, UK - April 2011?
For each course module, a “course description form” is/will be made, taking into account “learning objectives”.

What are they?
- Learning outcomes specify what learners’ new behaviours will be after a learning experience
- They state the knowledge, skills, and attitudes that the learner will gain through training
- Using an action verb (Bloom taxonomy) and describe something observable or measurable

Why are they important?
- Tool for learning assessment
- Clearly communicate expectations to learners
- Clearly communicate graduates’ skills to prospective employers
- Guide and organize the instructor and the learner
During the courses videos will be made to be used for web-based learning

→ “cyber-book”, next to “traditional” handbook for 1 module (in English)
First results (cont’d)

- Develop and apply a mechanism for the evaluation of training material, courses (and providers)
  - Started, but we aim to re-evaluate first results, incorporating ECVET approach
  - ? HOW ? : answers from this workshop ? (discussion group 2)

- Establish a recognised and sustainable "quality label" for training events
  - Development of methodology, implement & sustained via EUTERP

- Create a database of training events and training providers
  - Will be published on website ENETRAP and EUTERP
First results (cont’d)

- Bring together national initiatives to attract early-stage radiation protection researchers on a European level
  - Finalized, information for early-stage will be made available via website

- Development of a European passport for CPD in RP
  - Not started yet
  - Connection to other E&T areas
  - Connection with ECVET?
Conclusion

- ENETRAP projects:
  - Progress according to plan
  - Useful results
  - Keep strong connection to EUTERP, your input is important!

- This EUTERP Workshop: presentation of intermediate results

- Disseminate results to national RP communities
Thank you for your attention