

THE CHALLENGES IN RADIATION PROTECTION EDUCATION AND TRAINING IN LITHUANIA

6th International Conference on Education and Training in Radiological Protection
Valencia, Spain
30 May – 3 June 2015

Mr Julius Žiliukas
Department of Expertise and Exposure Monitoring
Radiation Protection Centre



Radiacinės saugos centras

CONTENT

- ✓ Radiation Protection Education and Training System
- ✓ Education and training appraisal mission
- ✓ Challenges in radiation protection education and training



Radiation Protection Education and Training System in Lithuania



GENERAL REQUIREMENTS FOR EDUCATION AND TRAINING IN RADIATION PROTECTION

- ✓ Law on Radiation Protection;
- ✓ Order of the Minister of Health;
- ✓ Training programmes approved by RPC;
- ✓ Verification of TSOs trainings organized by RPC;
- ✓ Categorization of specific groups which have to be trained;
- ✓ Legal entities and enterprises responsibilities;
- ✓ Recognition of RPO;
- ✓ Elements of National Strategy are in place.

RADIATION PROTECTION EDUCATION

- ✓ There are no any Universities in Lithuania educating radiation protection specialists.
- ✓ But there are study programmes including some courses which are close to radiation protection, such as radiation protection technologies, radioecology, nuclear engineering, medical physics etc.
- ✓ The legal requirements exist for making **compulsory training** necessary for radiation protection officers (RPOs) and workers dealing with ionizing radiation sources.



UNDER THE LAW ON RADIATION PROTECTION THE FOLLOWING HAVE TO BE TRAINED:

- ✓ **RPO**;
- ✓ **Workers** dealing with ionizing radiation sources;
- ✓ **Government officials** (*Customs officers, State Border Guard Service officers, Police officers and fire fighters*) **and other employees and persons** (*as workers of metal scrap yards*) whose work (activities) is associated with orphan sources of ionizing radiation and detection of materials contaminated with radionuclides;
- ✓ **Staff responding to emergency** situations (*firemen, police officers, workers of medical emergency service*).

UNDER THE ORDER OF THE MINISTER OF HEALTH:

- ✓ **14 modules** of radiation protection training have been drawn, which are a guide for developing radiation protection training programmes for various groups of specialists (*RPOs, workers dealing with ionizing radiation sources, governmental officials, etc.*).
- ✓ Each group of such specialists works with ionizing radiation sources of different risk categories (I to V), and **programmes** are also developed taking into account the **risk category of radiation sources** dealt with by each group.

Requirements for minimum level of education and training duration for RPOs:

In medical area:

RS risk category	Minimum education	Primary training duration	Repeated training (every five years)
I	University degree in biomedicine, physical sciences or technological sciences	270 hours	20 hours
II, III	University degree in biomedicine, physical sciences or technological sciences	270 hours	20 hours
IV, V	University degree in biomedicine, physical sciences or technological sciences	60 hours	20 hours
Dental X-ray machines	University degree in biomedicine, physical sciences or technological sciences	20 hours	8 hours

In industrial area:

RS risk category	Minimum education	Primary training duration	Repeated training (every five years)
I	University degree in biomedicine, physical sciences or technological sciences	270 hours	20 hours
II, III	Higher education in biomedicine, technological or physical sciences, or specialized secondary school education for graduates up to 1995	270 hours	20 hours
IV, V	High school education, or specialized secondary school education for graduates up to 1995, and acquired professional qualifications equivalent to the type of work	60 hours	20 hours

Requirements for minimum level of education and training duration for *workers* dealing with ionizing radiation sources:

In medical area:

RS risk category	Minimum education	Primary training duration	Repeated training (every five years)
I - V	Higher education in biomedicine, physical sciences or technological sciences, or specialized secondary school education for graduates up to 1995, and acquired professional qualifications equivalent to the type of work with ionizing radiation sources	30 hours	20 hours
Dental X-ray machines	Higher education in biomedicine, physical sciences or technological sciences, or specialized secondary school education for graduates up to 1995, and acquired professional qualifications equivalent to the type of work with ionizing radiation sources	14 hours	8 hours

In industrial area:

RS risk category	Minimum education	Primary training duration	Repeated training (every five years)
I - V	Secondary school education and acquired professional qualifications equivalent to the type of work with ionizing radiation sources	30 hours	20 hours

Requirements for minimum level of educational and training duration for governmental officials and others:

For Government officials:

	Minimum education	Primary and repeated training (every five years) duration
Heads of: Customs Department, State Border Guard Service, Police Department, Fire and Rescue Department	As required under the legislation of the Republic of Lithuania, regulating professional training of such specialists	5 hours
Customs officials		8 hours
State Border Guard Service officials		5 hours
Policemen		6 hours
Fire fighters		8 hours
Municipal Civil Protection specialists		6 hours

For administration members and workers of scrap yards and scrap recycling facilities:

	Minimum education	Primary and repeated training (every five years) duration
Heads and administration members	Basic education (18 years and older)	5 hours
Workers	Basic education (18 years and older)	8 hours

UNDER THE LEGISLATION:

- ✓ Legal entities and enterprises must at **their own expense** organize compulsory training and assessment of knowledge of workers engaged in activities with ionizing radiation sources in order to conduct practices with ionizing radiation sources or where workers are exposed.
- ✓ RPC inspectors carrying out supervision and control **can evaluate radiation protection knowledge of the staff during inspections.**
- ✓ Under license issuing regulations, **an applicant must provide** to RPC a list of workers and **copies of certificates** proving every worker's professional qualifications and **radiation protection qualifications.**

ROLE OF RADIATION PROTECTION CENTRE IN THE FIELD OF RADIATION PROTECTION TRAINING

- ✓ **Assesses the knowledge on radiation protection** of workers dealing with ionizing radiation sources and RPOs.
- ✓ **Confirms the programmes** (*main topics, duration*) of the training.
- ✓ **Organises qualification improvement courses** – seminars for RPOs and workers dealing with ionizing radiation sources, for other persons included in radiation protection.
- ✓ In cooperation with IAEA **organises trainings for trainees, trainings and practices for specialists.**
- ✓ **Organises radiation protection training courses for Government officials** (*Customs officials, State Border Guard Service, Police officers, fire fighters, municipal civil protection specialists*).



Education and training appraisal mission (EduTa)



Education and Training Appraisal Mission

- ✓ IAEA provide Education and Training Appraisal Missions (EduTA) for Member States.
- ✓ On the request of the RPC an EduTA mission was conducted on 9-13 November 2015 under the Technical Cooperation regional project RER9109 “Strengthening Education and Training Infrastructures and Building Competence in Radiation Safety”.



Education and Training Appraisal Mission

Main objectives

- ✓ To carry out a detailed appraisal of the status of the provisions for education and training in radiation protection and the safety of radiation sources in Lithuania;
- ✓ To identify areas in education and training, where the provisions should be improved to meet the IAEA safety standards, the national education and training needs and best practices;
- ✓ To provide the Lithuania with recommendations and suggestions for improvement;
- ✓ To provide key staff in the Lithuania with an opportunity to discuss the legislative framework and the national policy and strategy in the field, with the EduTA team members who have experience in the issues at stake;
- ✓ To promote the IAEA Standards and Guidelines relevant to the scope of the appraisal.

Education and Training Appraisal Mission

Recomendations

- ✓ A recognition system should be developed for the Qualified Experts (QE) and sufficient QEs must be recognised to provide expert advice to the licensees in Lithuania.
- ✓ In parallel to the establishment and implementation of QE recognition system, a separation of the functions and duties between QE and RPO should be arranged.
- ✓ The training program should be enhanced towards establishing and promoting a National Strategy on education and training in radiation, transport and waste safety.



Challenges in radiation protection education and training



Council Directive 2013/59/Euratom

- ✓ Lithuania is a member of European Union and is required to transpose the requirements of the Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (Council Directive) into the legislation of Lithuania by 6 February 2018.

Council Directive 2013/59/Euratom

- ✓ One of the challenges for many EU countries will recognition of Radiation Protection Experts (RPE)
- ✓ For proper transposition of the provisions of Council Directive related to RPE the following should be solved:
 - ✓ identification of areas of activities in which RPE shall be recognized;
 - ✓ the qualification and experience of RPE taking to account activities;
 - ✓ the education, training and retraining programmes established for recognition and continuous professional development;
 - ✓ transposition to national legislations tasks of RPE on which the advice to undertakings should be provided;
 - ✓ will be it mutually recognized in EU.
- ✓ The Radiation Protection Officers (RPO) in Lithuania actually carries out the duties expected of the RPE, and the high level of training required for RPOs is equivalent to that required for the RPE.

CONCLUSIONS

- ✓ Lithuania has created system of radiation protection training based on Lithuanian legislation and EU and IAEA recommendations.
- ✓ Legal requirements for radiation protection training are developed and met in practice.
- ✓ The created system ensures that persons, who work and deal with ionizing radiation sources or are responsible for radiation protection at working objects, get the main information and skills, required for their effective work and safety.
- ✓ As a the Member State of European Union Lithuania has to transpose and implement provisions of Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation.
- ✓ One of the main challenges of this process is the recognition of Radiation Protection Experts (RPE) in compliance with Council Directive.

THANK YOU FOR YOUR ATTENTION



Radiācijas saugos centras