

Project	INSC Project MC3.01/13
Title	Training and Tutoring for experts of the National Regulatory Authorities and their Technical Support Organisations for developing or strengthening their regulatory and technical capabilities
Contract	N° NSI/2014/343-969 (between the EC and ITER-Consult)
Subject	Sub-Task 2.1: Trainings 6th Regional Training Course

Sub-Task 2.1: Regional Trainings – 6th Regional Training Course
“Radiation Protection and Regulatory Emergency Preparedness”
April 11 – 15, 2016 – Yerevan

Minutes

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Objective of the Training – The one week Regional Training Course had the objective to:

- present and discuss the topics of radiation protection (RP) and emergency preparedness & response (EP&R) with focus on the functions and responsibilities of the Nuclear Regulatory Authority (NRA),
- transfer EU and international approaches related to RP and EP&R.

The participants, a group of 15 trainees, came from NRAs and TSOs from 7 different countries from the region, namely: Armenia (2), Belarus (1), Georgia (1), Moldova (1), Mongolia (4), Tajikistan (1) and Ukraine (5). Turkey also nominated a trainee, whose participation was cancelled in the last moment due to the geopolitical situation in the region.

The training followed the attached program (Annex 1). The list of participants signed on a daily basis is attached (Annex 2). The training was held in English, some comments were addressed in Russian.

Synthesis of the training activity - The training started with a welcome from the Technical Project Leader Mr. Antonio Madonna (ITER), who explained the EC INSC program and highlighted the objective of the T&T Phase III project financed by EC.

He presented the objective of the training and the program, including one practical application to be carried out by the trainees. The importance of encouraging continuous interaction during the training activity between trainers and trainees in order to maximize the transfer of knowledge was underlined and continuously requested from both sides during the training implementation. The EC infrastructure for nuclear and radiation safety was presented focussing on EC directives, EC institutions, performed stress test after Fukushima and the importance to ensure continuous improvement in nuclear and radiation safety and promote transparency.

The structure and content of a typical emergency plan and emergency zoning (with reference to both on-site and off-site emergency plan) were presented and discussed with definition of roles and identification of responsibilities of government, operator and regulator, and their interfaces. Aspects related to: source term estimation, environmental monitoring, periodic drills, requirements for preparedness, response (early and late phase countermeasures), treatment of exposed people, lessons learned from Fukushima accident, public communication in normal operation and during and after emergencies were covered in details.

During the implementation the following specific subjects were presented and discussed in a systematic and comprehensive way:

- EU infrastructure for Radiation Protection and Nuclear Safety
- Role and responsibilities of a Nuclear Regulatory Authority (NRA)
- NPP safety conception and potential accidents
- Essentials of Radiation Protection
- Basic notions of radiation protection for nuclear and radiological emergencies
- Nuclear and radiological emergencies: an overview
- On-site nuclear emergency plans
- Off-site nuclear emergency plan: organization, requirements and periodic drills
- Early phase countermeasures
- Late phase countermeasures
- Regulatory role for Nuclear emergency
- Transfer processes of released radioactivity to man and environment
- Atmospheric dispersion: interpretation of model and measurements results

- Environmental monitoring and data management
- Triage, monitoring and treatment of people exposed to ionizing radiation
- Organization of nuclear and radiological emergency exercises
- Legally binding national and international instruments related to emergency preparedness
- Legal requirements on data notification & information exchange
- Lessons learned from other historical radiological accidents
- EU requirements for EP&R
- Public communication during normal and emergency conditions

Questions from the trainees were welcomed during the presentations as it was of utmost importance to clarify basic concepts and provide additional information when needed.

The training week topics, which were presented and discussed in details are listed in Annex 3.

The Practical Application was dedicated to *“Emergency Exercise”*, which consisted in performing an exercise related to the main functions to be covered by the Nuclear Regulatory Authority during an emergency situation. The supporting material was provided in advance to the trainees.

The trainees were divided in three groups:

- ✓ “nuclear assessment group”,
- ✓ “radiological assessment group”,
- ✓ “management group”.

The groups need to discuss and perform the tasks as follows:

- ✓ assessment of nuclear safety,
- ✓ assessment of radioactive release,
- ✓ assessment of dispersion and radiological consequences and
- ✓ simulated communication with the public, media and IAEA.

They elaborated and presented the results following the evolution of the nuclear accident scenario. The Practical Applications gave the possibility to the trainees to perform a team work, to confront their knowledge and national practices and to establish a good collaboration guided by Local Armenian and EU expert.

In numbers: 6 different lecturers for a total of 22 lectures/presentations and 1 practical application were included in the intensive training programme. Training days were concluded with a summary of the daily activity performed with the purpose to strengthen key aspects.

The week was summed up with a Course Summary on Friday afternoon.

The trainees were asked to present in short the situation in their country, which helped the representative from the countries in the region to get useful information one from the other.

At the end of the training a detailed technical questionnaire was submitted to the trainees. It is an anonymous questionnaire. The purpose is to verify and evaluate the degree of profit achieved during the course. It is also an indicator of the effectiveness of the performed transfer of knowledge.

The training material was organised per each trainee in a dedicated folder printed out in advance and distributed to the trainees.

Conclusions - The training activity was carried out covering all topics from the program, including one additional presentation on "NPP safety conception and potential accidents", providing effective examples and experiences, keeping the focus on the regulatory perspective.

The team of attending trainees 15 participants from Nuclear Regulatory Authority and TSOs of 7 countries from the region, namely: Armenia (2), Belarus (1), Georgia (1), Moldova (1), Mongolia (4), Tajikistan (1) and Ukraine (5) actively contributed with their questioning attitude to create a good atmosphere for acquiring of information and collaboration with the lecturers. The lecturers were all making their efforts to ensure effective transfer of knowledge.

The trainees appreciated the program and content of the training showing high interest and expressing their view and considerations. The Practical Application was of particular interest for them. They have thanked the organisers and the EC for the opportunity given to take part in such a Regional event, which gave them the possibility to establish contacts with their colleagues from the region.

The multiple choice technical questionnaire was submitted to the trainees during the last day afternoon. It was individually filled in.

Each trainee was asked to express his/her opinion and remarks on the course to be used for feedback and improvement. The overall trainees opinion is that this Regional training is very useful for their everyday work.

Provided with the training material in electronic and paper folder the trainees have the possibility to take notes, to go through it again and even to distribute it in their organisation.



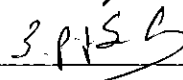
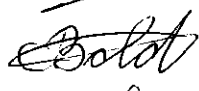
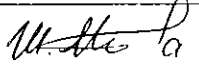
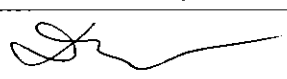
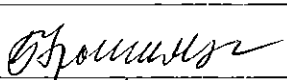



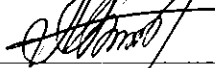

ANNEXES

- Annex 1 Training Program
- Annex 2 List of participants
- Annex 3 List of lectures/presentations

Yerevan, 15.04.2016

A. Madonna (TPL)

N. Zeleznik (Course Coordinator)

Trainees	Organiz. & Country	Signature
Mr. Arpi Khachatryan	NRSC/Armenia	
Ms. Satine Vardanyan	ANRA/Armenia	
Mr. Maksim Mazurenka	GOSATOMNADZOR/ Belarus	
Mr. Vasil Didbaridze	Ministry Of Internal Affairs/Georgia	
Mr. Victor Bold	National Agency on Regulation of Nuclear & Radiological Activities/Moldova	
Mr. Munkhtulga Shaariibuu	National Emergency Agency/Mongolia	
Mr. Damdinsuren Zuzaan	General Agency for Specialized Inspection/Mongolia	
Ms. Uranchimeg Batdelger	Nuclear Energy Commission/Mongolia	
Mr. Shagj Sandag-Ochir	NRSD of Metropolitan Specialized Inspection Agency/Mongolia	
Mr. Jahon Misratov	NRSA/Tajikistan	
Ms. Ganna Borzdova	SNRIU/Ukraine	
Ms. Iryna Gorokhovska	SNRIU/Ukraine	
Ms. Anna Havriuk	SNRIU/Ukraine	
Ms. Svitlana Prus	SNRIU/Ukraine	
Mr. Oleksandr Kurman	SNRIU/Ukraine	