Information sheet on NATO Advanced Training Course

“Identification and Neutralization of Chemical Improvised Explosive Devices”

1. Director from NATO country:
Professor Slawomir Neffe, Military University of Technology, Sylwester Kaliski Street 2, 00-908 Warsaw, Poland. Tel. +48-22-683-93-63, +48-22-664-66-32; fax1. +48-22-683-95-82, fax2. +48-22-683-94-70. E-mail: sneffe@wat.edu.pl

2. Director from Partner country:
Professor Valery Kukhar, Institute of Bioorganic Chemistry and Petrochemistry of National Academy of Sciences of Ukraine, Murmanska Street 1, Kiev, Ukraine, Tel. +38-4455-85388. E-mail: kukhar@bpci.kiev.ua

3. Meeting venue:
Military Institute of Engineer Technology
50-961 Wroclaw 43, ul. Obornicka 136, Poland,
phone +48-71 347-44-40, fax +48-71 347-44-04. www.witi.wroc.pl , witi@witi.wroc.pl

The partner organizations involved in the course are: Military University of Technology, Warsaw, Poland, www.wat.edu.pl; Institute of Bioorganic Chemistry and Petrochemistry, Kiev, Ukraine, http://bpci.kiev.ua; International Centre for Chemical Safety and Security, Poland, www.iccss.eu; and others.

4. Dates of meeting
24-28 of March 2014.

5. Objectives of the ATC

The recent use of chemical weapons in Syria and growing use of toxic chemicals and explosive materials in the terrorist activities and other crimes brings mass killings and many victims, disruption of social life, and lead to economic burdens to society more than other criminal acts, with increased effectiveness.

At NATO and the leading organizations of this Advanced Training Course (ATC), including Institute of Bioorganic Chemistry and Petrochemistry of National Academy of Sciences of Ukraine, Kiev, Ukraine, Military University of Technology, Warsaw, Poland, International Centre for Chemical Safety and Security, Poland, we have studied these issues and agreed that specialized courses followed by specially designed program should be developed to assist our law enforcement services and their inter-ministerial partners in facing the challenge.

There are many national and international activities that address the challenge of CBRN materials used for the terrorist activities and other crimes. They are oriented towards the prevention, preparedness for and response to the misuse of chemical, biological and radiological agents for illegal purposes. The organizers of the ATC invited the representatives of the leading national and international programs to unite efforts and to develop an advanced training course to deal with the different aspects of prevention, preparedness for and response to the use of toxic chemicals and explosive materials in the terrorist activities and other crimes.

The ATC course is structured to capitalize on the national and international experience gathered. The organizers look forward the development of effective prevention,
preparedness for and response to use of toxic chemicals and explosive materials in the terrorist activities and other crimes as their strategic priority. The organizers intend to explore the opportunities to facilitate consultation on breaking chemical and explosives cases. An important priority for the organizers is national capacity building. We intend to collect and disseminate the available experience and capacities and publish response guides. We also intend to create e-learning courses and model curriculums for law enforcement agencies.

The overarching objective of the ATC is to enhance public security through promoting advanced technologies, methodologies and best practices in preparing the respective governmental agencies to respond in the case of facing the threat of improvised explosive devices filled with Chemical Warfare Agents (CWA) and other highly toxic substances: Chem-IED. The specific objectives evolve around training as a method of acquisition, collection and dissemination of the knowledge about the Chem-IED.

The first goal of the ATC is to assemble, systematise and adapt the best available expertise, knowledge and teaching techniques relevant to the subject of Chem-IED. The second objective is to train skilled personnel in the practical aspects of the response to chemical, physical and psychological risks resulting from possible uses of Chem-IED. The third goal is to record all new knowledge and shared expertise brought into a training range by every participant and create a model training curriculum. The fourth goal is to draw conclusions and improve training content and means. The fifth is to elaborate and publish proceedings and developments of the course. The sixth goal is to create a network of specialist on the basis of all human resources engaged in the course.

This ATC will provide the base knowledge on devastating effects of explosion of Chem-IED, properties of explosives, toxicity of CWA, detection, protection, disposal and clean-up after the explosion. The ATC targets the scenarios of using such weapons, methods of non-destructive evaluation and detection, countermeasures to be undertaken, safe neutralization and disposal techniques. The course covers different construction of the Chem-IED, different trigger mechanisms, delivery means (including mines, small air planes and suicide bombers), chemical substances of interest, safety of the operations. The methodology of the ATC is based on lectures delivered by top ranked experts, laboratory exercises with methods of non-destructive evaluation and detection of Chem-IED, field exercises for training using heavy armored bulldozers, robots etc. personal protection, decontamination on-site and of-site, equipment. Special attention will be paid on seminars, brain storming and discussions between participants on the risk assessment and risk analysis, and risk reduction measures to be undertaken in the case of using Chem-IED.

The course gives opportunity to build and improve professional skills of trainees, improve safety and security procedures, increase national and international antiterrorist security level and, as a consequence, enhance trainees’ countries preparedness and in the case of facing the Chem-IED attacks. The course will help to develop security standards matching international requirements, improving interoperability and effectiveness of international cooperation in this area. NATO countries will benefit from greater compatibility between Their and Partner countries security systems, as well as, more effective international cooperation in counter-terrorism operations.

6. Main presentations, specialists and their affiliations

1) “Introduction, the scope of the course and goals”; Professor Slawomir Neffe, Military University of Technology, Warsaw, Poland.

2) CBRN Terrorism Prevention Program: INTERPOL /tbc/


Valery Kuksar, Institute of Bioorganic Chemistry and Petrochemistry of National Academy of Sciences of Ukraine.
4) “International potential in responses to Chemical Improvised Devices (Chem-IED)”.


6) Chemical warfare agents (CWA), toxic industrial chemicals (TIC) and hazardous materials. Their possible use in Chem-IED. Col. Slawomir Kleszcz, The Head of the Polish CBRN forces. Professor Dr. Eng. Wolfgang Spyra, Brandenburg University of Technology, Cottbus, Germany.

7) Safety and security aspects when working with Chem-IED, CWA and other hazardous materials. Personal protective equipment (PPE). Collective protection. Dr. Pavel Castulik, Research Centre for Toxic Compounds, Masstryk University, Brno, Chech Republic.

8) “State of the art in detection and identification of CWA, industrial toxic chemicals, explosives and other hazardous materials.” Dr. Jarosław Szulc, Military University of Technology, Warsaw, Poland. Former UNMOVIC inspector.
