

NSSC in Hungary: operating experiences on field of scientific support

Nuclear Security Support and Training Centers (NSSC) has a role in a country to support relevant authorities and other organizations who are responsible for nuclear security to sustain the national nuclear security regime. NSSCs are covering the areas of human resource development, technical support, and scientific support. An NSSC also helps to implement nuclear security culture and enhances national coordination and collaboration among the various competent authorities involved in nuclear security. Although it focuses mainly on national systems, it also has international importance. The NSSC Network of the International Atomic Energy Agency (IAEA) can be a useful platform to identify other Member States with different capabilities and international training activities to help to strengthen nuclear security within a country.

Hungary is operating an NSSC. The leader organization is the Hungarian Atomic Energy Authority (HAEA) which covers mainly the field of regulation and prevention as well as training activities. Several other facilities like Technical Support Organizations (TSO) help the Authority to sustain the national nuclear security system in the country. One of the TSOs is the Hungarian Academy of Sciences Centre for Energy Research (MTA EK) which is responsible mainly for scientific support. This activity is one of the key areas of NSSCs. In general scientific support services for provision of expert advice, analysis, technology testing and evaluation, as well as research and development (R&D) for nuclear security. This type of assistance is needed when a specific scientific challenge arises that is not covered in existing procedures or specialized analytical capabilities and R&D are needed to handle it.

MTA EK is able to assist different authorities and organizations in the field of R&D to nuclear security instrumentation and applications. Besides, technical reachback is also available as remote support on advanced alarm assessment using expert advice, as well as on-site analytical or operational support to respond nuclear security events by stakeholders. MTA EK's mobile capabilities with preparedness service can provide assistance e.g. during radiological crime scene management. Specially trained subject matter experts and comprehensive knowledge on the usage of radiation measuring devices are available. Trained in-field practice and several SOPs are also existing for on-site activities, like field activities of the Mobile Expert Support Team.

Specific area is the technology testing to help authorities to evaluate the efficiency and sensitivity of the existing detection systems for improvement. MTA EK is also establishing recently a training facility using different scenarios for first responders to train them to be prepared for various nuclear security events.

Besides, MTA EK is operating a centralized national Nuclear Forensics Laboratory which has technical capabilities, expertise and advanced laboratories equipped with various analytical techniques to analyse radioactive evidences. Dedicated storage for evidences and own chain-of-custody system is also available. Following long-term activities (since 1993) of MTA EK in this field the Centre for Energy Research was nominated as a Collaborating Center of the IAEA for nuclear forensics in 2016.

This paper will present HAEA's and MTA EK's capabilities in R&D in the field of HRD and scientific support inside the Hungarian NSSC system.

Gender

Not Specified

State

Hungary

Authors: Ms KOVACS-SZELES, Eva (Hungarian Academy of Sciences Centre for Energy Research (MTA EK)); Mr STEFANKA, Zsolt (Hungarian Atomic Energy Authority)

Presenter: Ms KOVACS-SZELES, Eva (Hungarian Academy of Sciences Centre for Energy Research (MTA EK))

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