

## Field: EMERGENCY PREPAREDNESS AND RESPONSE

### Topic: INSPECTING OF EMERGENCY PREPAREDNESS

**Date:** 19-23 September 2022

**Duration:** One week

**Location:** Budapest, Hungary

**Working language of the course:** English

#### **Objective and learning outcomes**

Participants will become familiar with the aspects of regulatory inspection of the emergency preparedness and response (EPR) plans, the harmonization of plans and preparedness on national, organizational, local and facility levels. Special emphasis will be put on the lessons learned from Fukushima accident and the consequential "stress tests" in European nuclear power plants.

#### **Outline of course content**

- Introduction of the internationally accepted emergency classification system: 5 emergency preparedness categories (EPC). Definitions of emergency classes: alerts, facility emergencies, site area emergencies, general emergencies. Structure of emergency planning, preparedness, and response system in countries with and without nuclear power reactors in the European Union. Roles and responsibilities of on-site emergency response organizations (EROs) of facilities of EPC I and II.
- Potential dose consequences of major nuclear emergencies with significant radioactive release into the environment. Legislative issues: reference levels for emergency responders and the public, conditions for designation emergency workers and responders. Fundamentals of dose control of the public under accidents conditions: system of reference level, generic criteria, and operational intervention levels (OILs). Applicability of projected doses and received doses.
- Main goals of inspection of the emergency preparedness plans of nuclear installations and other stakeholders. Description and applicability of procedures for event identification and classification by means of pre-defined observables and emergency action levels (EALs) under all possible conditions; deduction and verification of EALs; definitions of worst credible accident for the given facility; time requirements of observing, classifying, and reporting all classes of emergency; procedure to activate the on-site ERO; record keeping during an emergency; dosimetric and radiation protection issues.
- Inspection of cooperation of on-site EROs with pertinent national organizations for emergency response. Inspection of cooperation of on-site EROs with international organization related to nuclear emergencies: European Community Urgent Radiological Information Exchange (ECURIE), ENSEMBLE platform of the European Union and the IAEA Incident and Emergency Centre (IEC). Inspection of procedures for reporting and communications with pertinent national and international organizations; communication with other stakeholders (local authorities, medical services, police, media, etc.)
- Account of the on-site ERO on their recent developments and improvements on their EPR plan as the result of recent targeted safety reviews (stress tests). Inspection of documents on recent trainings and exercises related to the EPR plan.
- Tabletop exercise for evaluating the emergency preparedness report and the status of the EPR plan of a nuclear installation. The players form one or more groups of inspectors, the controllers play the role of the ERO of the facility under inspection. The ERO handles over a brief (1-2 pages) description on the recent real-time emergency exercise of the facility. The task of the players is to identify the weaknesses of the report: which key issues (if any) of the EPR plan were not covered, which tasks (if any) were solved erroneously in the exercise. Their findings will be discussed with the ERO to find and dedicate the improvements.
- Technical visit is planned to the Centre for Emergency Response, Training and Analysis (CERTA) of the Hungarian Atomic Energy Authority (HAEA).

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### **Technical schedule and delivery methods**

The course consists of one module taking a working week (i.e. 5 workdays).

- **Classroom lectures** take 4 days with 4 units per a day (tentatively morning sessions with 2 lectures of 90 minutes each, afternoon sessions with 2 lectures of 90 minutes each, with time allocated for discussions and appropriate breaks).
- **Tabletop exercise** will be included for which participants will form groups (4-5 persons each), and a 30-minute group discussion will be followed by a 45-minute exercise in two consecutive units.
- **Technical visit** to the Centre for Emergency Response, Training and Analysis (CERTA) of the Hungarian Atomic Energy Authority (HAEA).

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### **Target audience**

This course is intended to experts and professionals of Nuclear Regulatory Authorities (NRAs) and Technical Support Organisations (TSOs), preferably with responsibilities and experience related to emergency preparedness.

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**Target number of participants:** 15 – 25

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### **Prerequisites and requirements for participants**

Participants should have a university degree obtained in engineering or physics faculties with nuclear specialization, at least 1-2 years of related experience, and an adequate level of knowledge in English.

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### **Terms of participation**

The project is implemented under the European Union (EU) external assistance programme called the European Instrument for International Nuclear Safety Cooperation (INSC) and aims to support the National Nuclear Regulatory Authorities (NRAs) and their Technical Support Organisations (TSOs) in non-EU countries in strengthening their capabilities with regard to their regulatory tasks and responsibilities in the field of nuclear safety and radiation protection.

Employees of the NRAs or their TSOs in the Beneficiary Countries are eligible for financially supported participation in the T&T courses. Beneficiary Countries of the project are published on the website <https://training.ek-cer.hu/>.

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### **Costs**

Travel costs and subsistence allowances (including the international and national travel tickets, per diems, shuttle services, insurance and visa costs) for participants will be covered by the project.

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### **Application**

Application via the website <https://training.ek-cer.hu/>, according to the process and deadlines indicated there.

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### **Examination**

Technical and linguistic tests will be written as part of the application and selection process to assess the underlying knowledge and preparedness of applicants. Knowledge and development of selected participants will be assessed through technical tests throughout the course.

Participants attending the full course will be issued with attendance certificates. Successful participants will receive certificates confirming their knowledge achieved and skills acquired.

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