

PROSPECTUS

International Training Course on the Physical Protection of Nuclear Material and Nuclear Facilities

Albuquerque, New Mexico, United States of America, 19 April–8 May 2009

J0-TR-37526 NSF08164

- Title:** International Training Course on the Physical Protection of Nuclear Material and Nuclear Facilities
- Place:** Albuquerque, New Mexico, United States of America
- Date:** 19 April to 8 May 2009
- Deadline for Nominations** **30 November 2008**
- Organizers:** International Atomic Energy Agency and the Department of Energy of the United States of America.
- Language:** The language of instruction will be English.
- Participation:** The training course is open to participants from IAEA Member States. Preference will be given to Member States eligible to receive technical assistance. Candidates from other Member States will also be considered provided that the nominating government bears the full cost of their participation.
- Objective:** The objective of the training course is to establish awareness of the need for an integrated system of physical protection (PP) of nuclear material and nuclear facilities that is effective against threats of radiological sabotage and theft of nuclear material. The course will familiarize participants with international instruments, IAEA guidance and current PP concepts and technology and provide information that will assist in developing and implementing physical protection systems with reference to systems engineering, state-of-the-art technology and facility analysis.
- Participants' Qualifications:** The course is intended mainly for persons who are responsible for designing and/or assessing physical protection systems, for operators and managers of such systems, for those preparing associated regulations and for persons from the competent authorities. It is assumed that they will have a basic technical background and some experience in physical protection. Representatives of other organizations may attend the course, as their needs require, their backgrounds permit, and if space is available.
- The working language of the course is English. It is essential, therefore, that participants have a good knowledge of that language.
- Nature of the course:** The course consists of lectures and small-group working sessions. The course sessions are grouped and presented in the same sequence, as this approach should be applied in an actual physical protection design and evaluation process. During the small group sessions, the participants apply course concepts as they work through practical exercises on a hypothetical

facility. Visits to selected facilities are included where feasible. Information on specific Member States' concepts for physical protection is also included.

**Brief description
of the contents:**

1. ***Introduction***

The course will begin with an introductory session on international instruments, IAEA guidance and the physical protection design process, which will familiarize the participants with the total integrated process they will be working through as the course progresses.

2. ***Physical Protection System Design Requirements***

This set of sessions will allow the participants to determine the environment in which the protection system will exist (facility operations and conditions), what the system must protect against (threat), and what the physical protection system must protect (targets). Nuclear security culture, risk management and regulatory requirements are also included.

3. ***Physical Protection Technologies and Systems***

This session will begin with an overview of physical protection systems, followed by sessions on specific systems and technologies, such as intrusion detection, access control, alarm assessment, communication and display, access delay and response. The results of field experience and laboratory evaluation will be presented in these sessions, with emphasis on the applicability of these technologies to the needs of various Member States.

4. ***International Standards, Guidelines and Recommendations***

Information will be provided regarding international standards and guidelines on physical protection with emphasis on the Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendments and IAEA/INFCIRC/225/Rev.4; as well as the objectives, functions and organizational characteristics of State systems, in general, and those of the United States and of other selected representative Member States.

5. ***Evaluation Techniques***

A brief summary of techniques for analysing physical protection systems and evaluating their effectiveness will be presented. Two types of techniques will be emphasized: 1) the evaluation of overall physical protection system effectiveness; and, 2) single and multiple adversary path analysis and evaluation. Scenario and insider analysis will be also considered.

6. ***Application***

The functions of a physical protection system and the integration of these functions into an effective system will be reviewed. A hypothetical facility will be introduced to the participants as the basis for physical protection system upgrade and design exercises. These practical exercises will require the use of all the major concepts

presented in the course, resulting in reinforcement and a review of the design and evaluation process.

**Application
Procedure:**

The course is open to government-sponsored participants. Nominations should be submitted in duplicate on the standard IAEA nomination form for training courses. **Nominations should include the name; birth date and place; nationality; education and experience; occupation and employer's address; and applicant's passport number and expiration date. An additional US Personal Information Form (see Annex to Nomination Form) for visa purposes must also be completed for this course.** Completed forms should be endorsed by and returned through the appropriate official channels (the National Atomic Energy Authority, the Resident Representative of the United Nations Development Programme, or the Ministry of Foreign Affairs). They must be received by the International Atomic Energy Agency, PO Box 100, 1400 Vienna, Austria, for the attention of the Office of Nuclear Security, Department of Nuclear Safety and Security (Fax No. +431 2600 29299), not later than **30 November 2008. Applications sent directly by individuals or by private institutions cannot be considered.**

**Language
Certificate:**

In the case of countries in which English is not an official or customary language, a separate certificate of the candidate's proficiency in English must accompany the nomination. A language school or cultural institution, or an embassy of a country in which the language of the course is spoken must issue this certificate.

**Administrative
and financial
arrangements:**

Nominating governments will be informed as soon as possible, after the closing date for applications, of the names of the selected candidates and will be given full details of administrative and financial matters.

Participants from countries eligible to receive technical assistance will be provided with a least cost round-trip air ticket by the most direct route to the course or, alternatively, a travel grant not exceeding 50% of the IAEA's full return economy fare from the participant's home to the course location. Accommodation during the course will be paid for, as well as most meals. Participants will also receive a fixed amount to cover the cost of meals not provided by the Government during the course, return transfers between home and airport and airport and course venue, airport taxes, visa costs and other incidentals.

No tuition fee will be charged.

It should be understood that the organizers of the course do not accept liability for the payment of any costs or compensation that may arise from the illness, injury, disability, or death of any participant while travelling to and from or attending the course, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage.

All participants should be medically examined and certified physically fit before leaving their home for this training course. Participants should also make their own arrangements for passports, visas, and vaccinations.