

Training

HUMAN RADIATION PROTECTION

RADIATION PROTECTION AND CONFINEMENT

March 17-21, 2014 – Fontenay-aux-Roses, France

The objective of this training module is to provide knowledge transfer in radiation protection, both for workers and the public, and in the confinement of radioactive substances at nuclear facilities. The course therefore focuses on demonstrating that:

- exposure to ionizing radiation is the main risk of a nuclear facility and must be properly assessed to reach the objective of adequate radiation protection for workers and the public;
- provisions are implemented to limit and optimize internal and external exposure of workers at nuclear facilities, from design through to dismantling. To this end, various tools are used for monitoring and helping to reduce workers' exposure;
- limiting the exposure of workers and the public relies in particular on the confinement

of radioactive substances. Provisions must be made to:

- avoid the dispersion of radioactive substances inside the facility during normal operation, as well as in the event of an accident;
- reduce radioactive release from the facility to the environment during normal operation, as well as in the event of an accident. As release cannot be completely prevented, its impact on the population must be assessed to ensure that it remains at an acceptable level (especially during normal operation) or to implement counter-measures to mitigate it.

ATTENDANCE

The training module focuses on radiation protection at nuclear facilities and the confinement of radioactivity in them. It is intended for professionals employed by NRAs or TSOs, with a master's degree or similar higher education diploma, and involved in nuclear safety and radiation protection activities. Basic knowledge of ionizing radiation and nuclear safety are prerequisites for this course.

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LEARNING OUTCOMES

The expected outcome is to improve the participants' competencies and understanding in the following areas:

- fundamental principles of radiation protection and corresponding regulations;
- types of ionizing radiation and their health effects;
- ways of and provisions for reducing, monitoring and optimizing occupational exposure at the nuclear facility;
- design principles for confining radioactive substances and reducing radioactive release at nuclear power plants and fuel cycle facilities;
- main steps for assessing the radiological impact of release on the population;
- ways of limiting the exposure of the population in the event of an accident, and the various offsite countermeasures that can be implemented.

PROGRAM

A five-day training session with lectures alternating with working groups.

EXAMINATION

Knowledge testing will be performed on the full course content.

TEACHING METHODS

Lectures and working groups on specific topics (optimization, public exposure) are combined. The course consists of class courses alternating with working groups. For each training session, documents are provided for class courses and working groups.

PRICE AND REGISTRATION

- The price for this course is € 2,500. This covers instruction, documentation, technical visits and lunch and coffee breaks.
- To register complete and submit the online ENSTTI form. Select: RADIATION PROTECTION AND CONFINEMENT 2014.
- Registration Deadline: February 28, 2014

Type	Description	Lenght
Part I: Radiation Protection of Workers		
Class courses	<ul style="list-style-type: none"> ■ A01 - Ionizing radiation and health effects ■ A02 - International standards ■ A03 - Radiation protection of workers ■ A04 -Exposure monitoring 	1 day
Class courses	<ul style="list-style-type: none"> ■ B01 - Optimization of radiation protection (including working groups) ■ B02 - Experience feedback ■ B03 - Decommissioning 	1 day
Part II: Confinement Systems		
Class courses	<ul style="list-style-type: none"> ■ C01 - Confinement of radioactive substances ■ C02 - Confinement at a nuclear power plant (including in severe accident situations) ■ C03 - Confinement at a nuclear fuel cycle facility 	1.5 days
Part III: Radiation Protection of the Public		
Class courses	<ul style="list-style-type: none"> ■ D01 - Radiation protection of the public during normal operation (including working groups) ■ D02 - Radiation protection of the public in an accident situations 	1.5 days
Assessment	Test to assess the knowledge acquired during the training course	