Training

HUMAN RADIATION PROTECTION

HUMAN AND ORGANIZATIONAL FACTORS (HOF)

28 September – 2 October, 2015 – Fontenay-aux-Roses, France

In high-risk industries, reliability does not solely imply technical reliability, but is also highly influenced by organizational, management and working environment factors. Ultimately, in high-risk industries such as nuclear power plants, all these components impact on performance, including safety performance. In particular, the HOF approach considers that, in a given working situation, certain behaviors are more likely to occur. HOF specialists analyze the interactions between human activity and the total environment in which it takes place, with the aim of assessing potential difficulties and suggesting improvements.

Given their importance in high-risk systems, HOF must be taken into account at every stage in the life of a facility. During the design phase, HOF experts are notably involved in anticipating future work activities, for example, to define man-machine interface specifications. During the operating phase, specialists assess nuclear facilities from the viewpoint of HOF issues, such as human activities involved in operations which are critical to safety. Organizational processes, such as skills or operating feedback systems (including event investigation) are also investigated by HOF experts. Last, the dismantling phase also requires a HOF approach since new risks arise relating to co-activity and subcontracting management.

HOF specialists mainly include ergonomists, psychologists and sociologists. Their analyses and assessments are supported by concepts and methods developed in Human and Social Sciences, including decision-making processes, skills development and safety culture.

WHO SHOULD ATTEND

The training module is aimed at professionals involved in nuclear safety activities and employed by Nuclear Regulatory Authorities and Technical Support Organizations.
LEARNING OUTCOMES

The training aims to provide participants with a detailed overview (concepts and methods) of Human and Organizational Factors (HOF). At the end of the session, they will be able to:

- estimate the different factors influencing working situations: environment, rules, organization, management, human actions, etc.;
- analyze the differences between the prescribed task and the actual one in a working situation;
- evaluate the role of human action in the overall reliability of high-risk systems such as nuclear industries;
- identify the role of HOF studies in nuclear safety at every stage in the life of a facility: design, operating, dismantling;
- understand HOF methodology for carrying out event analysis;
- develop an overall vision of the key organizational features involved in learning processes in high-risk systems such as nuclear industries;
- comprehend the conceptual and theoretical basis of use in understanding crisis management in a globalized world;
- discuss the concept of safety culture.

PROGRAM

The five-day training session will include lectures and working groups for a more practical approach.

EXAMINATION

Participants will be tested on all course content.

TEACHING METHODS

Lecturers will use a combination of lectures, working groups, videos and situation scenarios to help participants understand the impact of HOF on working situations.

PRICE AND REGISTRATION

- The price for this course is €2,500. This covers instruction, documentation, lunch and coffee breaks.
- To register complete and submit the online ENSTTI form. Select: Human and Organizational Factors
- Registration Deadline: 14 August, 2015
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<tr>
<th>Type</th>
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<tr>
<td><strong>Day 1: HOF Key Concepts</strong></td>
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| **Class courses** | A01 - Welcome - Introduction to the training  
A02 - The Überlingen accident - Working group  
A03 – Human and Organizational factors and nuclear assessment | 1 day |
| **Day 2: HOF Key Concepts (continued) - HOF in design, operating and dismantling** | | |
| **Class courses** | B01 - Introduction to Human and Organizational Factors: Key concepts and methods  
B02 – From human error to organizational reliability  
B03 - Human and organizational factors in design  
B04 - Man-Machine interface and control room supervision | 1 day |
| **Day 3: HOF Nuclear Event Investigation – Man-Machine interface – HOF nuclear assessment** | | |
| **Class courses** | C01 - Human and Organizational Factors in operation  
C02 - Human and Organizational Factors in dismantling  
C03 - Operating experience feedback and event investigation  
C04 - Analysis of an event - Working group | 1 day |
| **Day 4: HOF Reliability Analysis – Crisis Management** | | |
| **Class courses** | D01 - Human reliability analysis  
D02 - Human reliability analysis – Working group  
D03 - Crisis Management  
D04 - Crisis Management – Working group | 1 day |
| **Day 5: Safety Culture** | | |
| **Class course** | E01 - Safety culture | 1 day |
| **Assessment** | Multiple-choice test  
Discussion of the exam | |
| | End of training session | |