

VIEWS

MANAGING KNOWLEDGE TO INCREASE EFFICIENCY

The trend towards greater efficiency of civil servants, observed in many countries including France, involves a more rational use of human resources, in particular with the ongoing acquisition of knowledge and experience throughout the career of each employee. Organizations in charge of nuclear safety and security as well as radiation protection are no exception.

For a TSO such as IRSN, the harvesting, transmission and optimized use of knowledge are the pillars of a knowledge management policy– and, more broadly, of a human resources policy. This is a corporate project that requires ambitious and structured initiatives. IRSN, for example, is mapping its workforce's knowledge and characterizing its importance in terms of its missions. It has established an internal university composed of structures such as the School of Expertise, and it provides external training, especially on behalf of ENSTTI.

This ever-closer collaboration with a training and tutoring institution that has a European – even global – view of knowledge management allows IRSN experts involved in ENSTTI courses and tutorials to consolidate their doctrines and exchange practices, with a view to increasing the robustness of nuclear systems.



Jean Couturier,
Knowledge Management Department, Scientific Development Division, IRSN.

EXPERIENCE FEEDBACK

ONGOING IMPROVEMENTS BASED ON FEEDBACK FROM PREVIOUS COURSES

Session after session, ENSTTI endeavors to continually exceed the expectations of its trainees and tutees by tailoring the courses to their needs in terms of content and duration. Based on day-to-day discussions between senior experts and interns, courses on new topics have been added, and some existing courses have been redesigned.



“ As a member of IRSN's Nuclear Defense Expertise Division, I was part of a team of four experts tasked with designing a workshop on emergency management for terrorist attacks on nuclear facilities. ENSTTI proposed this international workshop, called EXTREME (for External threat response management exercises), to the IAEA. IAEA accepted the proposal to further the Agency's objective of raising awareness among its members and fostering an international exchange of views on this highly important and sensitive issue, IAEA accepted the proposal. The workshop was designed in a story-telling format based on the scenario of a terrorist attack against a fictitious plant in a fictitious country. From the attack to the response, the sequence was narrated by the four IRSN experts, each reflecting the views of one of the stakeholders involved in emergency management: the nuclear plant operator, the local State authority, the technical safety organization tasked with supporting the authority, and the response force. Although the scenario was a fictitious one, the experts cooperated closely in carrying out extensive preparatory work to support discussion of the real issues in a very credible way. The excellent feedback from the workshop participants on this prototype session, which was held near Paris last January, led to the IAEA's decision to request other sessions for 2013 and 2014. To conclude, I would say that EXTREME exemplifies ENSTTI's innovative approach to training and skill building in the sense that the workshop participants were given the opportunity to develop their own awareness and gain knowledge through active involvement in the discussion”. **Éric Gosset,** Nuclear Defense Expertise Division, IRSN.

NEXT SPECIALIST TRAINING COURSES IN 2013

- **Safety management for NRA**
July 01-05, 2013
VÚJE, Trnava – Slovakia
- **Operating experience assessment**
September 09-13, 2013
IRSN, Fontenay-aux-Roses – France
- **Nuclear fuel cycle safety**
September 09-20, 2013
IRSN, Marcoule – France
- **Site assessment**
September 23-27, 2013
VÚJE, Trnava – Slovakia
- **Transport regulations**
October, 2013
IRSN, Fontenay-aux-Roses – France
- **Nuclear reactor safety I**
October 21-25, 2013
ENEA, Bologna – Italy
- **External threat response management exercises (EXTREME)**
October, 2013
IRSN, Fontenay-aux-Roses – France
- **Instrumentation & control (I&C) and electrical systems**
November 11-15, 2013
ENEA, Rome – Italy
- **Nuclear reactor safety II**
December 16-20, 2013
IRSN, Fontenay-aux-Roses – France

More information is available at
www.ensti.eu

EXPERIENCE FEEDBACK (CONTINUED)



Just as one train may hide another, one initial request may reveal additional needs. Cécile Challeton-de Vathaire, an expert in dosimetry at IRSN, provided Jean-Faustin Sabouang from the Cameroon National Radiation Protection Agency with guidance on internal dosimetry during a one-month tutoring session. *“This gave me the opportunity to learn more about radiation protection in Cameroon as well as the needs of the national authority in charge of radiation protection”* Cécile

acknowledges. Meanwhile, Jean-Faustin gained knowledge of the methods used at IRSN to estimate doses from internal contamination, and in particular to interpret measurements. *“The discussions I had with Jean-Faustin during his internship showed that some additional tutoring would be useful to go beyond interpreting measurement results to actually implementing internal dosimetry monitoring, in particular as regards the methods we use for gamma spectrometry of urine samples,”* Cécile advocates. This experience showed that a one-month tutoring session may give tutees an overview of different specialized fields and the target level of competence, but that additional time is necessary to delve into those fields in a thorough manner. **Cécile Challeton-de Vathaire, Researcher, Internal Dosimetry Department, Radiation Protection Division - Radiological Protection & Health, IRSN.**

TUTEES & TRAINEES SPEAKING



BUILDING UP A WORLDWIDE NETWORK OF EXPERTS

A unique feature of ENSTTI is its global reach. As the two verbatim below clearly show, the trainees and tutees come from all over the world to attend ENSTTI courses. Subsequently, being part of the ENSTTI community means being part of a network of senior and junior experts spanning Europe, Africa, the Americas and Asia. There is no better place for cross-fertilization of best practices.



Jean-Faustin Sabouang is a radiation protection expert from the Cameroon National Radiation Protection Agency (CNRPA), the regulatory body, where he is tasked with assessing license applications submitted by organizations whose workers are exposed to radiation in the normal course of their day. At the end of 2012, he decided to apply for a tutoring session on internal dosimetry at ENSTTI. *“CNRPA had set up a program for radiological monitoring of workers*

AWARDS

The trainees below successfully passed the tests at the conclusion of the following courses held in the first quarter of 2013 and were awarded a Certificate of Knowledge based on their test results. Congratulations!

AWARDED WITH GREAT HONORS

SAFETY ASSESSMENT I: NUCLEAR SAFETY ASSESSMENT AND INSPECTION

- **Nairi Baghdasaryan**
NRSC, Armenia
- **Philip Speransky**
Gosatomnadzor, Belarus
- **Olivier Wellele**
CNEN, Brazil
- **Nelbia Da Silva Lapa**
CNEN, Brazil
- **Murasem Abu Gharal**
JNRC, Jordan
- **Nidaa Al-Faraheed**
JNRC, Jordan
- **Razali Noraini**
AELB, Malaysia
- **Noraishah Pungut**
AELB, Malaysia
- **Cesar Mugica**
NCNSS, Mexico
- **Abdelali Chtata**
CNESTEN, Morocco
- **Andrii Goroshanskyi**
SNRIU, Ukraine
- **Olga Gorodnicka**
SNRIU, Ukraine

SAFETY ASSESSMENT II: PROBABILISTIC SAFETY ASSESSMENT

- **Sonia Maria Orlando Gibelli**
CNEN, Brazil
- **Patrícia da Silva Pagetti de Oliveira**
IPEN-CNEN, Brazil
- **Abdeljalil Jraut**
CNESTEN, Morocco
- **Nguyen An Trung**
VARANS, Vietnam
- **Carl Nohay**
PNRI, Philippines
- **Andrii Shepichak**
SNRIU, Ukraine
- **Do Thanh Trung**
VARANS, Vietnam

TUTEES & TRAINEES SPEAKING

(CONTINUED)

exposed to radiation, for instance in hospitals with nuclear medicine facilities or in research laboratories, but this program was previously limited to external exposure and it seemed essential to include internal exposure as well" Jean-Faustin explains. His objective for the ENSTTI tutoring was to build skills in internal exposure monitoring with a view to revising the CNRPA's regulatory scope to include this type of exposure. "I had prepared a kind of roadmap for my tutoring where I had listed the items I wanted to be addressed, in particular concerning the monitoring of workers in the nuclear medicine sector. And I must say the tutoring given by Cécile Challeton-de Vathaire of IRSN met my expectations in terms of the knowledge I gained, as I could understand in detail the process of internal dose assessment as well as the regulatory framework for this kind of activity" he concludes. **Jean-Faustin Sabouang, Executive Scientist, Authorization, Recording & Licensing Department, Regulation and Control Division, Cameroon National Radiation Protection Agency.**



“ I am from the Licensing Review and Evaluation Section of the Nuclear Regulatory Division (NRD) of the Philippine Nuclear Research Institute (PNRI). I am assigned to review and evaluate license applications for the use of radioactive materials in industry, medicine, research and education, and for the distribution of radioactive materials in the Philippines. I also review and evaluate license applications for atomic energy facilities such as particle accelerators. And I am one of the lecturers at

our Nuclear Training Center. I learned about the ENSTTI training courses from the invitation sent to the Philippine Nuclear Research Institute (PNRI) by Mr. Didier Louvat. My immediate supervisor recommended that I take the training, since I expressed interest in attending the training, where I expect to enhance my knowledge of radiation protection of workers, the public and the environment. I took the training course on Radiation Protection and Confinement on 21-25 January 2013 at IRSN. In the lectures given to us, I found the following topics to be of particular interest: optimization of radiation protection; radiation protection of the public in normal operations; and radiation protection of the public in accidental situations. I am able to apply the enhanced knowledge on radiation protection I gained during the training to my daily evaluation and review of license applications for radioactive materials. Moreover, I am able to include some of the information I got from the radiation protection training in my lectures at our Nuclear Training Center. The topics discussed during the training session are useful in the preparation of the draft new nuclear and radiation safety law and in the planning of the regulatory staff training programs for nuclear power.” **Thelma P. Artificio, Licensing Review and Evaluation Section, Nuclear Regulatory Division, Philippine Nuclear Research Institute.**

AWARDS (CONTINUED)

Congratulations also to tutees who successfully passed the evaluation of their tutorial by a panel of judges, resulting in the award of a Certificate of Competence:

FIRST DEGREE WITH HONORS

SAFETY OF DECOMMISSIONING OF NUCLEAR FACILITIES

Quoc Hoai Truong

VARANS, Vietnam

SECOND DEGREE WITH GREAT HONORS

LOW DOSE RESPONSE IN HUMAN LYMPHOCYTE SUBPOPULATIONS

Tania Mandina Cardoso

Centro de Protección e Higiene de las Radiaciones, Cuba

VVER LARGE BREAK LOSS OF COOLANT ACCIDENT (LB LOCA) ASSESSMENT AND STUDIES USING THE CATHARE CODE

Tran Thi Trang

VARANS, Vietnam

INTERNAL DOSIMETRY

Jean-Faustin Sabouang

Cameroon National Radiation Protection Agency (CNRPA), Cameroon

PROJECTS

CALL FOR ENSTTI EXPERTS TO CONTRIBUTE TO THE NUSHARE PROJECT

The NUSHARE project launched in 2013, which originated as a Euratom education, training and information initiative, seeks to share and expand the nuclear safety culture at all levels in all nuclear sectors. One out of three working packages of the NUSHARE project is dedicated to the development of a training scheme for new entrants and professional staff working at nuclear regulatory authorities (NRAs) and technical safety organizations (TSOs). This important task is coordinated and implemented by ENSTTI. As a first step, it is intended to develop a mutually recognized Basic Training Program for NRAs and TSOs which will be followed by an Advanced Program for Senior Professionals.

All ENSTTI trainers and tutors are invited to participate in the NUSHARE project and contribute to the development of the Basic Training Program for NRAs and TSOs by sharing subject matter and teaching expertise and by assisting in the definition of a consistent, relevant and effective training program.

INTERESTED IN GETTING INVOLVED?

If you want to participate in the following activities of the NUSHARE project:

- review of the draft curriculum of the Basic Training Program for NRAs and TSOs;
- review and adjustment of teaching material;
- delivery of the pilot training sessions;
- evaluation of the overall training program;

please contact: andrea.braunegger-guelich@enstti.eu

Becoming involved in the NUSHARE project gives you a unique opportunity to be part of a European group of experts who are developing a mutually recognized and sustainable training program that will help ensure global nuclear safety and nuclear security.



The first meeting of NUSHARE, on April 17-18, 2013 in Paris - France.

ENSTTI prides itself in entrusting training courses and tutoring sessions to senior experts from GRS, IRSN, and an increasing number of ETSO TSOs and fellow organizations. Their unsurpassed competence and involvement contribute to the satisfaction of their interns and to the reputation of ENSTTI.

ENSTTI is pleased to welcome the following experts to its cadre of tutors:

GRS - GERMANY

Robert Kilger

IRSN - FRANCE

Jean-Paul Joret
William Plumecocq
Laurent Ricciardi

...and the following experts to its cadre of trainers:

ENEA - ITALY

Francesco Benvenuto
Fabrizio Bianco
Mauro Cappelli
Alessandro Dodaro
Orlando Fiorani
Alfredo Luce
Simone Mannori
Mario Palomba
Massimo Sepielli
Francesco Troiani

Alexandra Leyreloup
Tiberiu Mateescu
Patrice Montalti
Marianne Moutarde
Vincent Rebour
Pascal Regnier
Andrei Rodionov
Daniel Tasset
Virginie Wasselin

GRS - GERMANY

Boris Brendebach
Robert Kilger
Erik Strub
Marco Wehrfritz

LEI - LITHUANIA

Raimondas Pabarcius
Virginijus Vileiniskis

IRSN - FRANCE

David Baumont
Yann Billarand
Jean-Pierre Carreton
Bernard Casoli
Christophe Clément
Denis Depauw
Cécile Deust
Patrice François
Florence Gauthier
Christophe Getrey
Michel Guillard
Laurent Guimier
Karim Hamidi
Clément Lapierre
Cécile Lecarme

SSTC - UKRAINE

Oleksii Dybach
Oleksiy Ligotskii
Oleksandr Sevbo
Dmitriy Skripchak
Svetlana Smyshlyaeva
Oleksii Tokarevskiy
Dmytro Vorontsov

VÚJE - SLOVAKIA

Jozef Markuš
Igor Matejovič
Štefan Rohár
Štefan Škulec
Jozef Tomek
Peter Uhrík
Ruben Vidlička
Dagmar Zemanová

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