



E U R O S A F E
BERLIN 2002

GRS

IRSN

4 & 5 NOVEMBER 2002

Forum für nukleare Sicherheit

Forum sur la sûreté nucléaire

Forum for nuclear safety

Форум по ядерной безопасности



Co-sponsored by the European Commission



Towards convergence of technical safety practices in Europe

Programme Committee:

Benoît De Boeck, AVN
Peter Storey, HSE
Christer Viktorsson, SKI
José I. Villadóniga Tallón, CSN
Jean-Bernard Chérié, IRSN
Ulrich Erven, GRS

EUROSAFE is an international forum for discussions among experts from technical safety organisations, research institutes, safety authorities, utilities, the industry, public authorities and non-governmental organisations concerning the status of and recent achievements in nuclear installation safety, waste management, radiation safety and nuclear material security.

In its fourth year, the forum focuses on discussing the convergence of nuclear safety practices in Europe – which is also the general aim of EUROSAFE – and the latest work carried out by GRS, IRSN and their partners from the European Union and Eastern Europe.

Nuclear energy contributes approximately one third of European electricity production. A high level of nuclear safety is a priority for the countries of Europe and the technical safety organisations play an important role in contributing to that objective through appropriate approaches to major safety issues as part of their assessments and research activities.

The challenges to nuclear safety are increasingly international. Changes in underlying technologies, such as instrumentation and control, the impact of electricity market deregulation, demands for improved safety, the ageing of nuclear facilities, waste management, maintaining and improving scientific and technical knowledge and the need for greater transparency – these are all issues where the value of an international approach is gaining increasing recognition.

The development of the European Union and its future enlargement will also require closer collaboration between technical safety organisations and even more convergence of European nuclear safety practices. EUROSAFE aims to respond to these needs by offering a European forum for information on and discussion of important nuclear safety issues.

Technical Plenary Presentations

Contributors to the Panel Discussion

The lecturers of the
technical plenary
presentations and

Riitta Kyrki Rajamäki
(VTT, Finland)

Nikolai Michailovitch Sorokin
(Rosenergoatom, Russia)

Marta Ziakova
(UJD, Slovakia)

Heinz Laing
(Greenpeace Germany)

The discussion
within the panel
and with the audience
will be chaired by
Lars Högberg (Sweden)

14:00 Welcome

Lothar Hahn, GRS Director
Daniel Quéniart, Acting Director of IRSN

Address

Ashok Thadani, Director Office of Nuclear Regulatory
Research (US NRC, USA)

Address

Federal Minister for the Environment, Nature
Conservation and Nuclear Safety

Convergence of Nuclear Safety Practices in Europe

15:00 Convergence Process of Regulatory Safety
approaches over 25 years

Pierre Govaerts (AVN, Belgium)

15:15 Convergence of Technical Safety Practices
within Actual Projects and for the Benefit of the
Operator: The Unique Framatome ANP Experience

Reinhold Horstmann (Framatome, France)

15:30 Maintaining Skills and Competence

Patrick Miazza (Mühleberg NPP, Switzerland)

15:45 Co-operation, Networking and Priorities for
European Co-ordinated Nuclear Research

*Peter Storey (HSE, United Kingdom), Catherine Lecomte
(IRSN), Victor Teschendorff (GRS)*

16:00 Break

16:30 Panel Discussion

Final remarks

Lothar Hahn, GRS Director
Daniel Quéniart, Acting Director of IRSN

18:00 Reception

19:00 Guest Lecture

Ethical Problems of Acting under Risk
Carl Friedrich Gethmann (University of Essen, Germany)

20:00 Dinner

Seminar 1**Nuclear
Installation
Safety –
Assessment
and Analysis****Chairpersons:**

J. C. Niel (IRSN),
D. Rittig (GRS)

9:00 Neutron Fluence at the Reactor Pressure Vessel Wall – a Comparison of French and German Procedures and Strategies in PWRs
U. Jendrich (GRS), N. Tricot (IRSN)

9:30 Insights and Lessons Learned from the Brunsbüttel Piping Failure Event
H. Schulz, A. Voswinkel, H. Reck (GRS)

10:00 Break

10:30 Neutron Flux Oscillations at German BWRs
M. Maqua, K. Kotthoff, W. Pointner (GRS)

11:00 Fire-induced Damage to Electrical Cables and Fire Growth on Cables
O. Keski-Rahkonen (VTT, Finland), R. Bertrand (IRSN), M. Röwekamp (GRS)

11:30 French (1) and German (2) Experiences on Renewing of I&C Systems in NPPs
(1) F. Fradet, J. C. Péron, B. Soubies, O. Elsensohn (IRSN)
(2) E. Piljugin, H. Heinsohn (GRS)

12:15 Lunch Break

13:30 IAEA Extrabudgetary Programme on Mitigation of Intergranular Stress Corrosion Cracking in RBMK Reactors
R. Havel (IAEA)

14:00 Potential Risk of a Criticality Event During Refuelling
V. Lauriou, P. Deschamps (IRSN)

14:30 Upgrading of the Ukrainian and Armenian NPPs, the “2+2” Approach Applied for the Licensing of the Major Modifications
A. Gorbachev, D. Goetsch (IRSN), P. Kelm (GRS), V. Redko (SNRCU, Ukraine), N. Martirossian (ANRA, Armenia), A. Madonna (ANPA, Italy)

15:00 Break

15:30 Safety Reassessment of the Old Installations Involved in Fuel Cycle
M. Guillard (IRSN)

Seminar 2

Nuclear
Installation
Safety –
Research

Chairpersons:

C. Lecomte (IRSN),
V. Teschendorff,
K. Wolfert (GRS)

16:00 Regulations and Equipment Qualification Programme for Increased Operating Safety at Ignalina NPP

A. Alejev (Vatesi, Lithuania), M. Chouha (IRSN), G.A. Georgiou (Jacobi Consulting Ltd, United Kingdom), R. Shipp (Firecrest Consulting Ltd, United Kingdom)

16:30 End of Seminar 1

9:00 Model Formulations for Vulnerability Analysis of Targeted External Events

J. Sievers (GRS)

9:30 ASTEC Applications to VVER Reactors

J. P. Van Dorsselaere, W. Plumecocq (IRSN), H.-J. Allelein (GRS), Y. Zvonarev (KI, Russia), A. Bujan (VUJE, Slovakia), J. Dienstbier (NRI, Czech Republic), P. Kostka (VEIKI, Hungary), L. Kubisova (UJD, Slovakia), P. Matejovic (IVS, Slovakia)

10:00 Break

10:30 Summary of the Core Degradation Experiments CODEX

Z. Hózer (KFKI AEKI, Hungary)

11:00 ISP 47: Containment Thermal-hydraulics Computer Codes Exercise Based on TOSQAN, MISTRA, ThAI

J. Vendel, M. L. Caron-Charles, P. Cornet (IRSN), H. Paillère (CEA Saclay, France), H.-J. Allelein (GRS), K. Fischer (Becker Technologies GmbH, Germany)

11:30 Simulation of Melt Spreading in Consideration of Phase Transition

C. Spengler, H.-J. Allelein (GRS)

12:00 Lunch Break

13:30 Simulant Material Experiments to Resolve Severe Accident Issues

B. R. Seghal (Royal Institute of Technology, Sweden)

14:00 The EURSAFE Project

A. Mailliat, B. Clément, J. P. Van Dorsselaere (IRSN), K. Trambauer, H.-J. Allelein (GRS), R. Zeyen (CCR, France), J. M. Seiler, D. Magallon, G. Cognet (CEA, France), S. Marguet, J. L. Grange (EdF, France)

Seminar 3

Waste Management

Chairpersons:

W. Brewitz (GRS)
A. Cernès,
J.-M. Péres (IRSN),

14:30 Experiments on the Risk of Sump Plugging
J. M. Mattei, Y. Armand, L. Samier (IRSN), J. Murani, I. Vicena, J. Batalik, V. Gubco (VUEZ, Slovakia), O. I. Melikov, V. N. Blinkov, M. V. Davydov (EREC, Russia)

15:00 Break

15:30 Review of Thermophysical Studies at EREC Facilities in Support of Safety of Russian Design NPPs
V. N. Blinkov, O. I. Melikov (EREC, Russia)

16:00 Dynamic Event Trees for Probabilistic Safety Analysis
E. Hofer (GRS)

16:30 End of Seminar 2

9:00 SBK Studies on Deep Repository and Safety
C. Thegerström (SKB, Sweden)

9:30 Siting of a Geological Repository for Radioactive Waste in Germany – Latest Results of the AkEnd Regarding a New Site Selection Procedure
W. Brewitz, B. Baltes (GRS)

10:00 Break

10:30 Assessing Long-term Safety of Deep Disposal of HLW in Belgium: The SAFIR 2-Report
P. de Preter, P. Lalieux (ONDRAF/NIRAS, Belgium)

11:00 Ongoing Revision of the German Safety Criteria for Geological Disposal of Radioactive Waste
B. Baltes, W. Thomas (GRS)

11:30 Assessing the Potentialities of Integrated Modelling during Early Phases of Siting and Design of a Geological Repository: the REGIME Exercise
F. Besnus, C. Certes, C. Serres, A. Genty (IRSN), B. Baltes, K. J. Röhlig, K. Fischer-Appelt (GRS)

12:00 Lunch Break

13:30 Results of the EU-project SPIN on Testing of Safety and Performance Indicators

R. Storck (GRS), J. Alonso (ENRESA, Spain), M. Hugl (NAGRA, Switzerland), A. Laciocck (NRI, Czech Republic), J. Marivoet (SCK/CEN, Belgium), P. O'Sullivan (NRG, Netherlands), T. Vieno (VTI, Finland)

14:00 Evaluation of the Seismic 3D High-resolution Method at Argillaceous Tournemire IRSN Site

J. Cabrera Nuñez (IRSN)

14:30 Coupling of Transport Processes and Geochemical Processes – a New Feature in the EMOS-Code

H. C. Moog, U. Noseck, T. Kühle, D. Buhmann, H.-J. Herbert (GRS)

15:00 Break**15:30** Chernobyl Cases Studies Increasing Confidence Level in Transport Assessment in the Geosphere

L. Dewière (IRSN), D. Bugai (Institute of Geological Sciences, Ukraine), V. Kashparov (Ukrainian Institute of Agricultural Radiology, Ukraine)

16:00 Russian-German Co-operation in Developing a Methodological Approach for Disposal Site Selection in Hard Rock Formations

V. V. Lopatin, E. N. Kamnev, T. A. Gupalo (VNIPI PT, Russia), M. Wallner (BGR, Germany), J. Krone (DBE, Germany), W. Brewitz (GRS)

16:30 End of Seminar 3**Seminar 4****Environment and Radiation Protection****Chairpersons:**

A. Oudiz (IRSN),
W. Thomas (GRS)

9:00 Nord-Cotentin Radioecological Study – Uncertainty and Sensitivity Analysis

J. Brenot (IRSN)

9:30 Long-lived Radionuclides in the Environment: Iodine 129

R. Michel (University of Hannover, Germany)

10:00 Break**10:30** Assessment of the Health Consequences of the Chernobyl Accident in France

M. Tirmarche (IRSN)

Seminars

11:00 Recent Advances in Animal Radioecology and Mitigation of Animal Product Contamination after Accidents

B. J. Howard (CEH, United Kingdom), G. Voigt (IAEA)

11:30 How Conservative is 'Conservative' in Radioecology and Radiation Protection?

H. G. Paretzke et al. (GSF, Germany)

12:00 Lunch Break

13:30 Radioprotection from the Environment to Man, ENVIRHOM

J. C. Barescut, J. C. Gariel (IRSN)

14:00 Restoration Strategies for the Chernobyl Cooling Pond

M. Dutton (NNC, UK), D. Weiss (GRS), O. Voitsekhovich (UHMI, Ukraine)

14:30 Improvement of the Yield and Quality of Potatoes on Radioactive Contaminated Area of Belarus

S. Tarasiuk (BRISSA, Belarus)

15:00 Break

15:30 Status of Radiation Research in Germany – Results from a Recent Survey

A. Artmann, H.-G. Friederichs (GRS), K. Komorowski (BMBF, Germany)

16:00 The Changing Role of the Radiation Protection Professional

J. Croft (NRPB, United Kingdom)

16:30 End of Seminar 4

Seminar 5

Nuclear Material Security

Chairpersons:

W. Gutschmidt (GRS),
Y. Souchet (IRSN)

Posters and computer
demonstrations
will be available for
consultations
throughout the Forum

9:00 Consequences of the 11th September Attacks on Physical Protection of Nuclear Facilities in Germany

J. Fechner (BMU, Germany)

9:30 Short and Medium Term Consequences of the 11th September Attacks on Physical Protection Activities in France

J. Aurelle, P. Cornu (IRSN)

10:00 Break

10:30 Theft of Small Amounts of Radioactive Material from Nuclear Facilities

R. Zipper (GRS)

11:00 Exercises on Physical Protection at Nuclear Facilities

A. Hagemann (GRS)

11:30 Physical Protection, Accountancy and Control Systems Vulnerability Assessments

R. Venot, J. L. Portugal (IRSN)

12:00 Lunch Break

13:30 Complementarity between Safety and Physical Protection in the Protection against Acts of Sabotage of Nuclear Facilities

R. Venot (IRSN)

14:00 IAEA Activities for the Physical Protection of Nuclear Material and Facilities

– The Role and Importance of IPPAS-Missions –
M. Soo Hoo (IAEA)

14:30 Seminars and Workshops on Physical Protection of Nuclear Material and Facilities in NIS and CEEC

– Development of Requirements and Needs –
P. Salewski (GRS)

15:00 Break

15:30 „United Kingdom Atomic Energy Authority constabulary (UKAEAC) - a dedicated police force: role and forthcoming organisational changes “

K. Wager (DTI United Kingdom)

16:00 „Physical protection of nuclear facilities in Sweden“

S. Isaksson (SKI Sweden)

16:30 End of Seminar 5