

ISOE International Symposium Brussels, 1 - 3 June 2016



Programme



Supported by











Brussels, 1-3 June 2016

The European Technical Centre of the Information System on Occupational Exposure (ISOE) is pleased to organize, in collaboration with and the support of ENGIE Electrabel and the Federal Agency for Nuclear Control (FANC), the 2016 ISOE International Symposium on Occupational Exposure Management at Nuclear Facilities.

The Symposium will be held in Brussels, Belgium, from the 1st to the 3rd of June 2016. It is cosponsored by the OECD Nuclear Energy Agency (NEA) and the International Atomic Energy Agency (IAEA).

The Symposium is targeted at all those concerned with radiological protection at nuclear power plants: radiation protection managers and staff members, maintenance and operation planners, contractors, exposed workers, regulatory body representatives and international organisations. It is also opened to research reactors and professionals from other nuclear fuel cycle installations sharing common radiological protection issues.

Dealing with occupational radiation protection at the design, operation and decommissioning stages of installations, as well as accident situations, this new meeting point of radiation protection professionals under the heading of ISOE will be a great opportunity to share, at the international level, experiences and practices favouring a continuous improvement of radiation protection.

Prior to the Symposium, on the 31th of May 2016, two meetings devoted to specific audiences have been organised:

- A Radiation Protection Managers meeting
- A Regulatory Body Representatives meeting

Furthermore, the accompanying Technical Exhibition will give participants the opportunity to see the latest developments from industrial and commercial companies active in fields of radiation protection.

We are looking forward to welcoming you in Brussels.

Caroline SCHIEBER
Head of ISOE-ETC
On behalf of the Programme Committee



Brussels, 1-3 June 2016

PROGRAMME COMMITTEE MEMBERS

Lucie D'ASCENZOISOE ETC, CEPN – FranceLaure-Anne BELTRAMIISOE ETC, CEPN – FranceBorut BREZNIKKrško NPP – Slovenia

Olivier COUASNON ASN – France

Ľubomír DOBIŠBohunice NPP – Slovak Republic **Monika FÁRNÍKOVÁ**Temelin NPP – Czech Republic

Nicolas GUILLEN Almaraz NPP – Spain Miska HIRVELÄ Loviisa NPP – Finland

Benoit LANCE ENGIE Electrabel – Belgium

Jizeng MA IAEA

Marie MICHELETEDF UNIE-GPRE – FranceDavid MILLERISOE NATC, Cook NPP – USA

Guy RENN Sizewell B Power Station – United Kingdom

Caroline SCHIEBERISOE ETC, CEPN – FranceVasile SIMIONOVCernavoda NPP – RomaniaTorgny SVEDBERGRinghals NPP – Sweden

Thomas TAYLOR Mühleberg NPP – Switzerland Hiroko TEZUKA ISOE ATC, NSRA – Japan

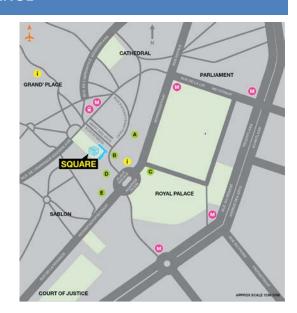
CONFERENCE LANGUAGE

The conference language will be English.

SYMPOSIUM VENUE

The Symposium will take place at:

SQUARE Brussels Meeting Centre Glass Entrance Parc du Mont des Arts 1000 Brussels





Brussels, 1-3 June 2016

DEDICATED MEETINGS – TUESDAY 31 MAY 2016

The ISOE Symposium will be preceded by two dedicated meetings devoted to specific audience.

If you wish to participate to one of those meetings, please contact the relevant person as indicated below in order to register to one of these meetings.

The registration to these meetings is free of cost.

| Radiation Pro | Radiation Protection Managers Meeting | |
|---------------|---|--|
| 09:00 - 17:00 | Location: ENGIE Electrabel Address: 34 boulevard Simon Bolivar - 1000 Brussels | |
| | Contact-person: | |
| | Benoit LANCE, ENGIE Electrabel Corporate, Email: benoit.lance@engie.com | |

| Regulatory B | Regulatory Body Representatives Meeting | |
|---------------|---|--|
| 09:00 - 17:00 | Location: FANC/AFCN Address: Ravensteinstraat 36 - 1000 Brussels | |
| | Contact-person: Swen-Gunnar JAHN, ENSI, Email: Swen-Gunnar Jahn@ensi.ch | |



Brussels, 1-3 June 2016

PROVISIONAL PROGRAMME

WEDNESDAY 1 JUNE 2016

| 08:00 - 08:30 | Registration | |
|---------------|------------------|--|
| | | |
| 08:30 - 09:00 | Opening Ceremony | |

| | The ISOE System and Follow-up of Fukushima Accident SG. Jahn (ENSI, Switzerland), V. Simionov (Cernavoda NPP, Romania) |
|---------------|---|
| 09:00 - 10:20 | The ISOE Strategic Plan TW. Hwang (ISOE Chair – KHNP, South Korea) |
| | ISOE Contributions to the Work of the Committee for Radiation Protection and Public Health (CRPPH): Past and Future |
| | A. Rakhuba (ISOE Secretariat – OECD NEA), E. Lazo (OECD NEA) Use of ISOE for the Assessment of the RP Practices and Results at ENGIE Electrabel B. Lance (ENGIE Electrabel, Belgium) |
| | New Radiological Control of Areas in Fukushima Daiichi NPS D. Ozaki (TEPCO, Japan) |

| 20.20 2.00 y 1.00 Sy 22y . 00.00 | | 10:20 - 11:05 | | |
|----------------------------------|--|---------------|--|--|
|----------------------------------|--|---------------|--|--|

| Session 2. | Source-Term Management |
|---------------|---|
| Chairpersons | B. Breznik (Krško NPP, Slovenia), Serge Blond (EDF EM RP, France) |
| 11:05 - 12h25 | Primary Water Chemistry Optimization to Reduce Source Term in Belgian Units K. Schildermans, P. Heine, R. Lecocq (ENGIE Laborelec, Belgium) |
| | Elaboration of an Optimized Source Term Reduction Program for a 58 Reactors Fleet |
| | A. Rocher, MC. Benoit-Alet (EDF UNIE-GPRE, France), C. Dabat-Blondeau, F. Renard, B. Voisin (EDF UTO, France) |
| | Ringhals Experience in Antimony and Silver related to Doses |
| | M. Johansson (Ringhals NPP, Sweden) |
| | EDF Feedback on the Management of Ag-110m Contamination |
| | M. Benfarah (EDF SEPTEN, France) |

| 12:30 - 14:00 | Lunch Progk | l |
|---------------|-------------|---|
| 12:30 - 14:00 | Lunch Break | |



Brussels, 1-3 June 2016

| Session 3. | Measurements |
|---------------|---|
| Chairpersons | M. Hirvelä (Loviisa NPP, Finland), D. Miller (ISOE NATC, USA) |
| 14:00 - 15:40 | Neutron Detection using a Gadolinum Covered CdZnTe Detector R. Coulon, V. Kondrasovs, J. Dumazert (CEA LIST, France) |
| | Make Visible the Invisible for a better Radiation Protection at EDF |
| | P. Romane (Chinon B NPP, France), E. Canal (EDF UNIE-GPRE, France), S. Blond (EDF EM RP, France), D. Vrammout (Gravelines NPP, France), R. Malbert (EDF UNITEP, France) |
| | Measurement Program for Occupational Exposure Source Terms with In-Situ Gamma Spectrometry Method in NPPs |
| | Q. Cao, L. Liu, W. Xiong, Y. Xiao, X. Sanqiang, Y. Zhao, X. Wei, H. Pan (China Institute for Radiation Protection, China) |
| | Air Sampling Programmes for Managing Internal Exposures: Review of Key Practical Issues |
| | G. A. Roberts, R. K. Bull, D. Spencer (Nuvia Ltd., UK) |
| | How to Correctly Choose the List of Relevant Isotopes to Assess Dose Uptake by Workers? |
| | G. Genard, B. Gonze, D. Hulhoven, S. Vanderperre (ENGIE Tractebel Engineering, Belgium) |
| 15:40 - 16:25 | Coffee-break, Visit of Exhibition, Posters |
| 16:25 - 16:45 | Conclusions from the Radiation Protection Managers and the Regulatory Body Meetings |

| Session 4. Chairpersons | Decontamination N. Guillen (Almaraz NPP, Spain), M. Michelet (EDF UNIE-GPRE, France) |
|-------------------------|---|
| 16:45 - 17:45 | Decontamination and Post-Decon Passivation Treatment of the RRS Loops and RWCU System as a Measure for Collective Dose Reduction and Recontamination Reduction at the Cofrentes NPP in Spain J. de Dios Sanchez Zapata (Cofrentes NPP, Spain), A. Basu (AREVA GmbH, Germany), M. A. Garcia Martinez (Cofrentes NPP, Spain), S. Hoffmann-Wankerl (AREVA GmbH, Germany) |
| | Analysis of Impact of the Primary Heat Transport Purification System on Outage Radiation Fields Y. Verzilov, Y. Kravtsova (Kinectrics Inc., Canada), A. Nedelcu, I. Popescu, V. Simionov (Cernavoda NPP, Romania) |
| | Alpha Activity and System Decontaminations L. Ekerljung (Forsmark NPP, Sweden) |



Brussels, 1-3 June 2016

THURSDAY 2 JUNE 2016

| Session 5. | Large Job Experiences |
|---------------|--|
| Chairpersons | T. Svedberg (Ringhals NPP, Sweden), O. Kvasnicka (Temelin NPP, Czech Republic) |
| 08:30 - 10:10 | Radiation Protection Success of Steam Generator Replacement in Blayais unit 3 (2014) |
| | J. Bonnefon, G. Ranchoux, O. Backes (EDF DIPDE, France), B. Roustit, H. Caullier (Blayais NPP, France), J. Sergeat, K. Hamon, D. Marié (AREVA NP, France) |
| | Reactor Pressure Vessel Closure Head Replacement of the Belgian Tihange 3 and Doel 4 units – Follow-up and On Site Dosimetry |
| | B. Walschaerts, D. Hulhoven, V. Bouchat, S. Vanderperre (Tractebel ENGIE, Belgium) |
| | Reactor Vessel Head Replacement at Tihange 3 – Transport Conditions and Storage of the Reactor Vessel Head T. Ost (Tihange NPP, Belgium) |
| | ALARA Program and RP Activities for the Reactor Vessel Head Replacement at CN Vandellòs II |
| | A. Prim Pujals, J. L. Sarria Gálvez, I. Vildósola Hernandez, A. Ribas Goset (Vandellòs II NPP, Spain) |
| | Development of IDIS (Integrated Drain Information System) for Reducing |
| | Radiation Exposure |
| | DU. Kim (Shin-Kori NPP (unit 3&4), South Korea) |

| T | |
|---------------|--|
| 10:10 - 10:55 | Coffee-break, Visit of Exhibition, Posters |

| Session 6. | Education and Training |
|---------------|--|
| Chairpersons | B. Lance (ENGIE Electrabel, Belgium), A. Geniaux (ASN, France) |
| 10:55 - 12:15 | ENETRAP III European Guidance on the Implementation of the Requirements of the Euratom BSS with Respect to Education and Training for RPE and RPO R. Paynter (EUTERP, The Netherlands), J. Stewart (HPA, UK), A. Schmitt-Hannig (BfS, Germany), M. Coeck (SCK•CEN, Belgium), A. Falcao (IST-ID, Portugal) |
| | Challenges of the Aging of the Brazilian Regulatory Authority |
| | G. Morais (CNEN, Brazil) |
| | Integration of Human-Factors within the Design of a Training Tool within the Radiation Protection Field: an Opportunity to Foster the Tool's Appropriation and Develop the Trainer's Competences |
| | L. Brunet (LIMSI-CNRS, France), I. Fucks, G. Le Meur, (EDF R&D, France), V. Boccara (LIMSI-CNRS, France) |
| | Radiation Protection Planning as a Relevant Course Content for Training ALARA in NPP |
| | SG. Jahn (ENSI, Switzerland) |



Brussels, 1-3 June 2016

| | | |
|---------------|-------------|---|
| | | í |
| 12.20 11.00 | Lunch Proak | 1 |
| 12:50 - 14:00 | Lunch Break | í |
| | | 1 |

| Session 7. | RP Management |
|---|--|
| Chairpersons L. Dobiš (Bohunice NPP, Slovak Republic), F. Henry (FANC, Belgium) | |
| 14:00 - 15:40 | Radiation Protection: an Approach for Simplification |
| | E. Canal, F. Saintamon (EDF UNIE-GPRE, France), S. Blond (EDF EM RP, France) |
| | Demonstrating ALARA across the UK Nuclear Industry - Implementation of the Control of Occupational Radiation Exposure (CORE) Regulatory Inspection Project |
| | G. A. Ingham (ONR, UK) |
| | The Way to Optimize Radiation Exposure Index at the Russian Nuclear Power Plants |
| | I. Doljenkov (Rosenergoatom, Russia), A. Kuchin (Kola NPP, Russian Federation) |
| | Improving Occupational Radiation Exposure using ALARA Tools: Performance Indicators |
| | V. Simionov, L. Samson (Cernavoda NPP, Romania) |
| | The Management of Radiographic Controls on the Construction Site of the Flamanville 3 EPR Reactor |
| | F. Veyssiere, S. Lelong (Flamanville 3 NPP, France), G. Abela (EDF DIPNN, France) |

| * | | ٠. |
|-------------------|--|----|
| | ! | |
| • | i | |
| 1 1 1 1 1 1 1 1 | 1 C-ff 1 1 1/21 -f F 1:11:11- D1 | |
| 15'411-16'75 | Coffee-break. Visit of Exhibition. Posters | |
| 1 1 3 40 = 10 7 3 | : COHEE-DIEUN, VISII OLI XIIIDIIIOH, EUSIELS | |
| , =00 | toller predict of Extribition, resters | |
| | | |

| | . Decommissioning | |
|---------------|--|--|
| Chairpersons | T. Taylor (Mühleberg NPP, Switzerland), TW. Hwang (KHNP, South Korea) | |
| 16:25 - 17:45 | ISOE Working Group on Decommissioning | |
| | I. Calavia (ISOE WGDECOM Vice-Chair – CSN, Spain) | |
| | Implementation of the Radiological Protection Principles in Decommissioning: | |
| | Lessons Learnt from Three Projects | |
| | P. Deboodt (SCK•CEN, Belgium) | |
| | Optimisation of RP during the Course of the Decommissioning of Spent Fuel | |
| | Channels | |
| | S. B. Navert (Mühleberg NPP, Switzerland) | |
| | José Cabrera NPP - Impact of the Chemical Decontamination on the | |
| | Decommissioning Works. Current State of Decommissioning Works | |
| | J. Campos Mendia (ENRESA, Spain) | |

|--|



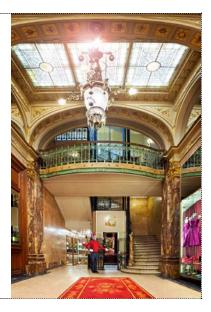
Brussels, 1-3 June 2016

19:00

Symposium Diner at Metropole Hotel

31, place de Brouckère - 1000 Brussels

Metro: 'de Brouckère' Station (in front of the hotel)
Train Station: 'Central station' (at +/- 500 metres)



FRIDAY 3 JUNE 2016

Technical visit (optional)

A technical visit is organised (full day) to the SCK•CEN Mol.

The bus departures and arrivals for each visit will be announced later on the ISOE Network website and to the registered participants.

The participation is subject to availability as the visit is restricted to a limited number of persons (see registration form).

How to get to Brussels?

By air: Brussels International Airport (BRU) is only 17 minutes away from the city centre and SQUARE. A direct train shuttle from the airport stops at Brussels Central, the railway station in front of the SQUARE building.

By rail: High-speed trains stop only at Midi/Zuid train station, except the ICE which stops also at Nord/Noord train stations. SQUARE is just across the way from Brussels Central railway station.



Brussels, 1-3 June 2016

ACCOMMODATION

Participants are responsible for making their own reservations.

ISOE has taken options in different hotels at special congress rates. These hotels are:

| Hotel Minimum price per night | Option Expiration Date | Reservation type |
|--|---------------------------|---|
| Hotel La Madeleine 82 € per night | 18 April 2016 | Online reservation Dedicated website from Brussels Booking Desk |
| Motel One Hotel 103 € per night | 18 April 2016 | |
| ARIS Grand Place Hotel 105 € per night | 18 April 2016 | |
| NH Grand Place Arenberg 173 € per night | 18 April 2016 | |
| IBIS Brussels Off Grand Place 180 € per night | 18 April 2016 | |
| Royal Windsor Hotel Grand Place 208 € per night | 18 April 2016 | |
| Sandton Brussels Centre 179 € per night | 18 April 2016 | |
| Four Points Brussels Hotel 149 € per night | 30 April 2016 | Online reservation Specific page of the Hotel website |
| Metropole Hotel 159 € per night | 24 April 2016 | Booking form (pdf) To be returned by fax or Email |

In order to benefit of the reduced price, please return the form or use the specific website link before the above expiration deadline.

More information can be found on the <u>ISOE Network website</u>.