



2015 ISOE International ALARA Symposium
on
Occupational Exposure Management at Nuclear Facilities
Programme

Rio de Janeiro, Brazil, May 26-28 2015

Organized by

Brazilian ISOE National Coordination
Centre

Co-sponsored by

International Atomic Energy Agency
(IAEA)

OECD Nuclear Energy Agency (NEA)

In collaboration with

Institute of Radiation Protection and
Dosimetry (IRD)

Brazilian Radiological Protection
Society (SBPR)

Supported by

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The Brazilian ISOE National Coordination Centre as a member of the ISOE IAEA Technical Centre with the support of ELETRONUCLEAR is pleased to organise in collaboration with the Institute of Radiation Protection and Dosimetry (IRD) and the Brazilian Radiological Protection Society (SBPR), the 2015 ISOE International ALARA Symposium on Occupational Exposure Management at Nuclear Facilities.

The Symposium will be held at the facilities of the IRD, Rio de Janeiro, Brazil, from 26 to 28 May 2015. It is co-sponsored by the OECD Nuclear Energy Agency (NEA).

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 organizations. It is also opened to research reactors and professionals from other nuclear fuel cycle installations sharing common radiological protection issues.

Dealing with radiation protection at the design, operation and decommissioning stages of installations, 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 the management of occupational exposures and the optimisation of radiation protection. 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 look forward to welcoming you in Rio de Janeiro, at the Institute of Radiation Protection and Dosimetry, hoping that this beautiful and academic meeting place will contribute to learn from each other and work together towards the continuous improvement of radiation protection.

Jizeng MA

Head of ISOE IAEA Technical Centre

On behalf of the Programme Committee



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PROGRAMME COMMITTEE MEMBERS

Jose Marcus GODOY	<i>SBPR - Brazil</i>
Marcos AMARAL	<i>Electronuclear – Brazil</i>
John HUNT	<i>IRD, Brazil</i>
Vasile SIMIONOV	<i>Cernavoda NPP – Romania</i>
Jizeng MA	<i>ISOE IAEA TC</i>
Lucie D'ASCENZO	<i>ETC, CEPN – France</i>
Caroline SCHIEBER	<i>ETC, CEPN-France</i>
David MILLER	<i>NATC, USA</i>
Tomoyuki NOMURA	<i>ATC, Japan</i>

SYMPOSIUM LANGUAGE

The symposium will be held in English.



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PROGRAMME

First Day - Tuesday, 26 May 2015

08:30 – 09:00	Registration
09:00 – 09:30	Opening Ceremony – ISOE, Electronuclear CNEN , IRD and SBPR

Session 1. Radiation Protection Management-1

Chairpersons : Jizeng Ma, Swen Jahn

09:30 – 10:30	ISOE Expert Group Activities, <i>Halil Burcin Okyar,</i> <i>OECD Nuclear Energy Agency</i>
	ALARA Planning and Controls According the Angra NPS ALARA Program, <i>William Alves Ferreira and Luciana Teixeira Marcos,</i> <i>Angra NPP, Brazil</i>
	Planning, controlling and execution of high radiological risk activities at Cernavoda NPP, <i>Catalina Chitu on behalf of Vasile Simionov,</i> <i>Cernavoda NPP, Romania</i>

10:30 – 11:00	Coffee break, Visit of Exhibition Booths, Posters
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Session 2. Radiation Protection Management-2

Chairpersons : Lucie D'Ascenzo, Halil Burcin Okyar

11:00 – 12:30	Systematic Development of Radiation Protection in Nuclear Facilities, <i>Sven Jahn,</i> <i>Swiss Federal Nuclear Safety Inspectorate (ENSI), Switzerland</i>
	Reprolam Network - Sharing knowledge and lessons learned in Latin America, <i>Luiz Ernesto Santos de Carvalho Matta,</i> <i>Instituto de Radioproteção e Dosimetria, Brazil</i>
	Radiation Protection Computer Code Analysis and Maintenance Program, <i>Luis Benevides,</i> <i>US NRC, USA</i>
	Cataract Risks and Radiation Protection for the Lens of the Eye, <i>Lisa Edwards,</i> <i>Electric Power Research Institute (EPRI), USA</i>

12:30 – 14:00	Lunch Break
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Session 3. Dosimetry and Monitoring

Chairpersons : John Hunt, Christer Solstrand

14:00 – 15:30	Radiological Work Control Considerations for Alpha Contamination Risk Activities at CNE Cernavoda, <i>Catalina Chitu,</i> <i>Cernavoda NPP, Romania</i>
	Analysis on Occupational Exposure of Radiation Workers in Korea based on KISOE Database, <i>Byeongsoo Kim,</i> <i>Korea Institute of Nuclear Safety, Republic of Korea</i>
	External and Internal Individual Monitoring of Occupationally Exposed Workers at CNAAA 1 and CNAAA 2 Nuclear Power Plants, <i>John Hunt,</i> <i>Instituto de Radioproteção e Dosimetria, Brazil</i>

15:30 – 16:00	Coffee break, Visit of Exhibition, Posters
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Session 4. Radiation Protection & Regulatory issues and on Design and Planning Stages

Chairpersons : Jose Marcus Godoy, Marcos Amaral

16:00 – 17:30	Licensing of nuclear facilities in Brazil: Radiological aspects, <i>Wagner de Souza Pereira,</i> <i>Indústrias Nucleares do Brasil S.A. (INB), Brazil</i>
	The Role of the Radiological Protection Team as a Stakeholder in the Design Phase of a Nuclear Facility: the Case of Brazilian Conversion Plant, <i>Ana Cristina Lourenço da Silva,</i> <i>Brazil, Indústrias Nucleares do Brasil S.A. (INB), Brazil</i>
	A Preliminary Study on 3D Simulation for Operation Dose, <i>Li Hua,</i> <i>China Institute for Radiation Protection, China</i>
	Virtual Reality Technology for Radioactive Job Planning and Worker Training at Nuclear Power Plant, <i>Yury Verzilov,</i> <i>Analytical and Waste Services Dept., Canada</i>
18:00 – 20:00	Cocktail Reception



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Second Day - Wednesday, 27 May 2015

Session 5. Source-Term Management – 1

Chairpersons : David Miller, Liye Liu

09:00 – 10:30	Radiation Field Source Term Control – Review of US Experiences, <i>Carola A Gregorich,</i> <i>Electric Power Research Institute (EPRI), USA</i>
	EDF Feedback on the management and the treatment of Ag-110m contamination, <i>Moëz Benfarah,</i> <i>EDF SEPTEN, France</i>
	Changes in Source Term After Steam Generator Replacement – Angra, <i>William Alves Ferreira and Luciana Teixeira Marcos,</i> <i>Angra NPP, Brazil</i>
	Study on the impact of the criteria to take offline the last reactor coolant pump, <i>Priscilla Mondit,</i> <i>EDF SEPTEN, France</i>
10:30 – 11:00	Coffee break, Visit of Exhibition, Posters



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Session 6. Source-Term Management – 2

Chairpersons : Staffan Hennigor, Sebastian Schneider,

11:00 – 12:30	Application of Cobalt Sequestration Resin for Source Term Reduction in BWRs, <i>Lisa Edwards</i> , <i>Electric Power Research Institute (EPRI), USA</i>
	Source Term Monitoring at CANDU® stations, <i>Yury Verzilov</i> , <i>Analytical and Waste Services Dept., Canada</i>
	CZT detector applied to the in-situ characterization of deposited activated-corrosion products in China's NPPs <i>Liye Liu</i> , <i>China Institute for Radiation Protection, China</i>
	Advances in Radiation Instrumentation to Achieve Enhanced Characterization of Source Term Reduction Results, <i>David Miller</i> , <i>North American Technical Center, USA</i>

12:30 – 14:00	Lunch Break
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Session 7. Radiation Protection in Decommissioning

Chairpersons : Tomoyuki Nomura, Carola A Gregorich

14:00 – 15:00	RP challenges associated with the dismantling of nuclear power plants, <i>Ludovic Vaillant</i> , <i>CEPN, France</i>
	IAEA project on occupational radiation protection and risk management during decommissioning activities at NPPs, <i>Peter Hofvander</i> <i>Occupational Radiation Protection Unit, IAEA</i>
	In what way the proposal for new developments in D&D at EDF could improve the global dosimetry? <i>Gérard Laurent</i> , <i>EDF CIDEN, France</i>

15:00 – 15:30	Coffee break, Visit of Exhibition Booths, Posters
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Session 8. Job Specific Experience

Chairpersons : Peter Hofvander, Gérard Laurent

15:30 – 16:30	Integration of the human factor in the ALARA Program for Steam Generator cleaning operations on EDF fleet units (NPGV), <i>Coralie Gaubert,</i> <i>EDF CIPN, France</i>
	Hung shielding, <i>Nicolas Mazarguil,</i> <i>EDF CIPN, France</i>
	Simulation of the Occupational Radiation Dose caused by Contamination of Primary Circuit Media in Pressurized Water Reactors, <i>Sebastian Schneider , Andreas Artmann , Gerd Bruhn,</i> <i>Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) GmbH, Germany</i>
16:30 – 16:45	Distinguished Paper & Poster and Closure of the Symposium



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Poster Session

1. Comparison Between Brazilian Radiation Protection Norm and The IAEA Basic Safety Standard Published in 2014
Wagner de Souza Pereira, Alphonse Kelecom, Ademir Xavier da Silva, Brazil
2. Comparative Study of Radioactive Waste Management Standards in Brazil
Ana Cristina Lourenço da Silva, Wagner de Souza Pereira, Indústrias Nucleares do Brasil S.A. (INB), Brazil
3. Determination of Effluent Annual Discharge Limits based on ODCM for Chashma Nuclear Power Generating Station (CNPGS), Pakistan
Makshoof A Mubbasher, M Naeem Ch., Ansar Mahmood, Khursheed, Pakistan Atomic Energy Commission (PAEC), Pakistan
4. Analysis of Gaseous Tritium Evaporation at Fuel Buildings
Minchul Kim, Central Research Institute, KHNP, Republic of Korea
5. ALARA Program Assessment for Korean Nuclear Power Plant
Jong Hyun Ko, Central Research Institute, KHNP, Republic of Korea
6. The state of the art about the radiation protection system in the world
Wagner de Souza Pereira, Indústrias Nucleares do Brasil S.A. (INB), Brazil
7. The principle of low risk and optimization and the connection with the ALARA concept, exemption, exclusion and clearance
Wagner de Souza Pereira, Indústrias Nucleares do Brasil S.A. (INB), Brazil
8. Alpha Activity and System Decontaminations
Lina Ekerljung- (Staffan Hennigör), Forsmarks Kraftgrupp AB, Chemistry and Radiochemistry, Sweden
9. Management System for Individual Radiation Monitoring by using TLD badge in Bangladesh
Aleya Begum, Md. R.K.Khan, Md.S. Rahman, Md.A. Hoque & M.M.M Siraj Health Physics Division, Atomic Energy Centre, Bangladesh
10. Does the automatic result given by the gamma spectrum analysis software means the reality? : Part of experience concluded from the first Whole Body Counter (WBC) intercomparison among NPPs in China
Ri Zhao, China Institute for Radiation Protection, China.
11. Introduction to Nuclear Power Plants' Individual Dose Data Management in China
Hongjuan Pan, China Institute for Radiation Protection, China



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Poster Session continued

12. The report of Polymer sampling performance test and practical use
Jung young-chule, Shin-Kori NPP, Republic of Korea
13. Reducing Dose Exposure and Improving Plant Efficiency with Rad-Tolerant CCTV Camera Systems
Keith Reeser, Diakont, USA.
14. The RP experience of the Steam Generator Replacement in Hanul Plant Unit 3, 4
Jeongseop Lee, Hanul NPP, KHNP, Republic of Korea
15. Case Study on Failure of N-16 Leak Monitoring at Hanbit Nuclear Power Plant Unit 3
Bo Kyun Seo, Korea Institute of Nuclear Safety, Republic of Korea
16. Search for ^{131}I in the environment in the triple border region of Foz do Iguaçu (Brazil-Argentina-Paraguay)
Andrea Guadalupe Sotto Calonga and Davi da Silva Monteiro, Universidade Federal da Integração Latino Americana Foz do Iguaçu – PR - Brazil

Third Day - Thursday, 28 May 2015

07:00 – 19:00

Technical Visit
Angra Nuclear Power Plant
departure: 07:00 – return: around 19:00



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GENERAL INFORMATION

SYMPOSIUM VENUE

The Symposium will take place at the IRD, Rio de Janeiro, Brazil.

REGISTRATION for PARTICIPAION

All persons wishing to participate in the Symposium are requested to register in advance by sending their Registration Form which can be found on the website: <http://www-ns.iaea.org/tech-areas/communication-networks/orpnet/news/isoe2015.asp> and <http://www.isoe-network.net/index.php/symposium-mainmenu-113/upcoming-mainmenu-74.html>, forms should be submitted by 30 April 2015.

There will be no Registration Fee for participants. Exhibitors will be charged a fee of 750 USD.

INVITATION LETTER for VISA APPLICATION

Participants who require a visa to enter Brazil should submit the necessary application to the nearest diplomatic or consular representative of Brazil as soon as possible. The necessity of an Invitation Letter for visa application should be indicated in the Registration Form.



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GUIDELINES FOR AUTHORS ON THE PRESENTATION OF ORAL

The presentation time will be 15 min presentation, 5 min for discussion, and at the end of each session, there will be an overall discussion.

GUIDELINES FOR AUTHORS ON THE PRESENTATION OF A POSTER

GENERAL:

Information on a poster should attract attention. It should therefore be limited to the most important facts only.

PREPARATION OF A POSTER:

Each poster author will be assigned a poster board bearing the assigned poster number.

The size of the boards is: 120 cm high and 87 cm wide. The recommended poster size is A0 (118.8cm x 84.0 cm).

All display material should be prepared in advance. Pins for mounting posters are available on-site.

The top of the poster should display, in lettering not smaller than 3 cm in height, the following information:

TITLE OF PRESENTATION, NAMES OF AUTHORS, AFFILIATIONS:

The text of the poster should be easily readable from a distance of 2 to 2.5 m. Machine typed characters are too small. Use heavy lettering at least 1 cm high.

The poster should be divided into:

Introduction

Method

Results

Conclusions

or an equivalent division. It is advisable to leave details and explanations for the face-to-face discussions.

PRESENTATION AT THE MEETING:

Poster authors are kindly requested to be at their posters for discussion with interested participants during the relevant poster session, as indicated in the meeting programme.

Text and presentation should be in English.

EXHIBITION BOOTHS

A technical exhibition will take place during the Symposium. Coffee-breaks will be held in the exhibition area.



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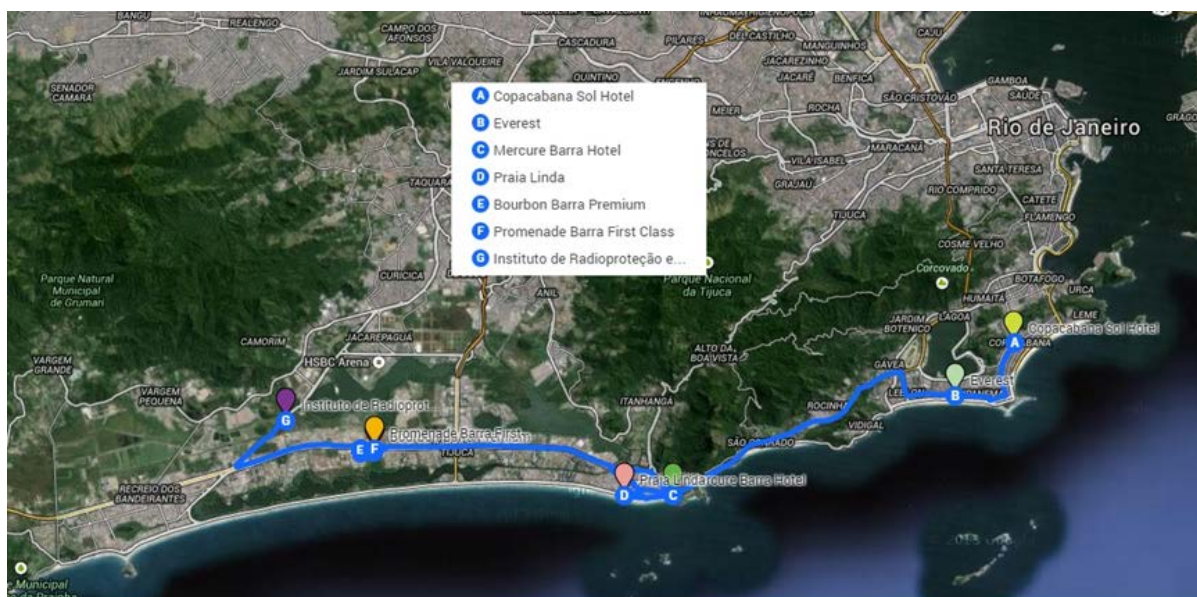
ACCOMMODATION

Participants are responsible for making their own reservations.

A list is herewith for some recommended hotels which show a reasonable cost/benefit.

How To GET To IRD

The Symposium organization will provide daily buses from/to the hotels (in the morning and back in the evening). It is foreseen that the bus will make 5 stops along the way. The following map showing the location of the IRD and the list of the proposed hotels. The hotels in green are the proposed bus stops. Road transport was never Rio's strong point. The road works taking place for the 2016 Olympics have made the situation worse. It is recommended booking a hotel in the Barra da Tijuca.



Map of Rio showing the hotels and location of the IRD

GETTING FROM THE AIRPORT TO THE HOTEL

The quickest and safest way to get to the hotel is by getting a taxi. There are two types of taxis: (a) special taxis: there are booths for three taxi companies at the immediate exit of customs. The three companies charge the same price, around R\$ 130 – 150. The ride is pre-paid. (b) normal yellow taxis – these run on the taxi meter and cost around R\$ 100 – 120 to the hotel.



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HOTELS IN RIO DE JANEIRO

DISTRICT	Hotel's Name	ADDRESS / SITE / PHONE NUMBER	SINGLE ROOM (US\$) Estimated	DOUBLE ROOM (US\$) Estimated	Distance / time to Symposium
BARRA DA TIJUCA	ATLANTICO SUL HOTEL	Avenida Lucio costa, 18,000 http://www.atlanticosulhotel.com.br Tel: 55 21 3418-9100	120	160	7,2 km /15 min
	BOURBON BARRA PREMIUM	Avenida Malibu, 1355 reservas.riodejaneiro@bourbon.com.br Tel: 55 21 3622-480 servas.riodejaneiro@bourbon.com.br	110	135	8 km /15 min
	CENTER HOTEL QUEBRA MAR	Estrada da Barra da Tijuca, 25 http://www.centerhotelbarra.com.br Tel: 55 21 2494-0728	56	92	22 km /30 min
	GAIVOTA HOTEL	Avenida Belizário Leite de Andrade Netto, 406 http://www.gaivotahotel.com.br Tel: 55 21 3139-1450 / 2493-9122	125	149	19 km /30min
	IBIS HOTEL	Avenida Gilberto Amado, 41 http://www.ibis.com/pt-br/hotel-8182-ibis-rio-de-janeiro-barra-da-tijuca/index.shtml Tel: 55 21 3721-7500 / 3721-7560	335 for 4 nights		19 km /30min
	MERCURE BARRA HOTEL	Avenida do Pepê, 56 http://www.mercure.com Tel: 55 21 2153-1200	103	117	18 km /30 min
	PRAIA LINDA	Avenida do Pepê, 1430 http://www.hotelpraialinda.com.br/ Tel: 55 21 2494-2186	107	113	17 km /30 min
	PROMENADE BARRA FIRST CLASS	Avenida das américas, 7897 / Condomínio Novo Mundo http://www.promenade.com.br/barrafirst TEL: 55 21 2169-1500	154	170	8 km /15 min
	TRANSAMERICA PRIME BARRA	Avenida Gastao Senges, 395 http://www.transamericagroup.com.br/br/nossos-hoteis/prime/barra Tel: 55 21 2123-7000	158	170	13 km /30 min
IPANEMA	EVEREST	Rua Prudente de Moraes, 1117 http://www.everest.com.br/rio Tel: 55 21 2103-1800 / 2525-2200	140	160	30 km /50 min
	PRAIA IPANEMA HOTEL	Avenida Vieira Souto, 706 http://www.praiaipanema.com/pt Tel: 55 21 2540-4949	180	200	29 km /50 min
LEBLON	MARINA PALACE HOTEL	Avenida Delfim Moreira, 630 www.hotelmarina.com.br Tel: 55 21 2529-5700	184	200	28 km /50 min
COPACABANA	COPACABANA SOL HOTEL	Rua Santa Clara, 141 http://www.copacabanasolhotel.com.br Tel: (55 21) 2549-8638 / 2549-4577	100	120	44km /70 min
	COPACABANA MAR HOTEL	Rua Ministro Viveiros de Castro, 155 www.copacabanamar.com.br Tel: 21.3501-7900	124	132	44 km /70 min
	RIO OTHON HOTEL	Avenida Atlântica, 3264 www.othon.com.br/hoteis/hotel-em-copacabana/rio-othon-palace Tel: 21.2106-2554	180	182	43 km /70 min
	TULIP INN COPACABANA	Avenida Atlantica, 2554 http://www.tulipinncopacabana.com/pt-pt Tel: 21. 3545-5100	145	164	31 km /70 min



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CONTACT-PERSONS

For registration and local arrangements:

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For abstracts and paper submission:

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