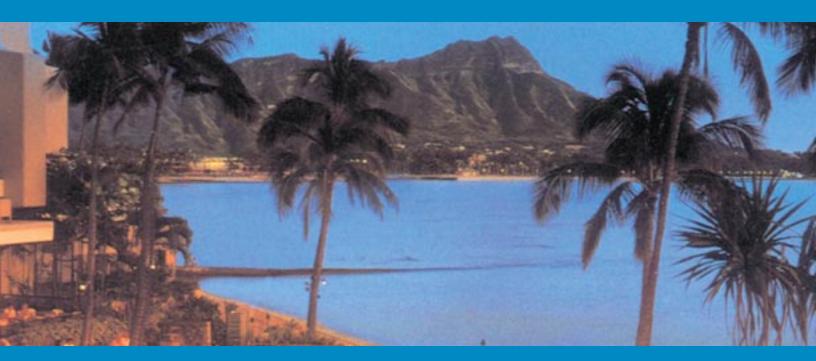
# 2004 PACIFIC BASIN NUCLEAR CONFERENCE

AND TECHNOLOGY EXHIBIT

March 21-25, 2004 • Sheraton Waikiki Hotel • Honolulu, Hawaii



# "New Technologies for a New Era"

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# Register Early – Save Money!

Register by the preregistration date, 4ebruary 20, 2004, to save \$100 on your meeting registration fee.

#### 14TH PACIFIC BASIN NUCLEAR CONFERENCE (PBNC)

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# 2004 PACIFIC BASIN NUCLEAR CONFERENCE AND TECHNOLOGY EXHIBIT

Hosted by the American Nuclear Society • Conducted under the auspices of the Pacific Nuclear Council

our most sincere thanks to the following sponsors for their support of the 2004 Pacific Basin Nuclear Conference

**Atomic Energy Society of Japan (GENES4/ANP 2003)** 

**Bechtel** 

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# 2004 PACIFIC BASIN NUCLEAR CONFERENCE AND TECHNOLOGY EXHIBIT

Hosted by the American Nuclear Society • Conducted under the auspices of the Pacific Nuclear Council

By the end of the 20th century, nuclear technology had become a major contributor to the betterment of life, both through safe, clean generation of electricity and through applications in medicine and industry. The 14th Pacific Basin Nuclear Conference (PBNC) will look ahead to the development of some exciting new nuclear technologies that promise to greatly expand the use of nuclear power and other nuclear applications in the 21st century.

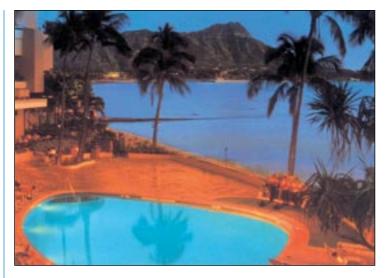
#### **Accommodations and Hotel Information**

The Sheraton Waikiki Hotel will be the location for the 2004 PBNC, where all meeting activities and technical sessions will take place. The Sheraton Waikiki commands a half-mile of sun-blushed sand, with over two-thirds of the rooms directly facing the Pacific. The hotel has 2 pools, shops, 4 restaurants, a fitness center, and beachfront outdoor venues.

#### **Local Attractions and Activities:**

For athletes, there's golf, tennis, and every imaginable water sport. For sun seekers, there are miles of white-sand beaches. For sightseers, there are museums, galleries, gardens, and historical sights. For shoppers, there are major malls as well as Kalalaua Avenue, the Rodeo Drive of Waikiki. For the entertainment oriented, there are luaus, lounges, and nightclubs. For foodies, there are first-rate restaurants. For the culture crowd, there's ballet, opera, theater, and chamber music. The bottom line? There's something for everyone on Oahu. Following are just a few of the highlights:

- U.S.S. Arizona Memorial One of the most-visited sites on the island is this stately white structure built above the battleship that was sunk with more than 1,100 men during the Japanese attack on Pearl Harbor on December 7, 1941. Pearl Harbor also is home to the U.S.S. Missouri where the surrender was signed.
- Polynesian Cultural Center By day, the people and culture of Fiji, Hawaii, New Zealand, the Marquesas, Samoa, Tahiti, and Tonga come to life at this top-rated attraction. By night, it's the site of the largest luau in the state and the largest Polynesian song and dance revue in the world.
- Iolani Palace America's only royal palace and residence, exquisitely restored and maintained, immortalizes the



Sheraton Waikiki Hotel

thrones of King Kalakaua and his successor, Queen Liliuokalani. History comes alive in a 45-minute guided tour.

- Hanauma Bay Not far from Waikiki, this horseshoeshaped marine conservation area is Oahu's premier beach for snorkeling.
- Bishop Museum For more than a century, the Bishop Museum has been the cultural keeper of the flame for Hawaii and Polynesia. It features fascinating exhibits and artifacts (including the skeleton of a giant whale) as well as a new high-tech planetarium.
- Diamond Head For the ultimate view of Honolulu and Waikiki, hike to the 760-foot summit of this natural landmark showcased in dozens of movies, hundreds of television shows, and millions of photographs. Originally called Leahi, it was nicknamed by visitors who thought the calcite crystals in the soil were diamonds.
- Waimea Valley Here visitors can enjoy 1,800 acres of tropical rainforest, including a 150-acre arboretum and botanical garden, cliff-diving shows, horseback riding, kayaking, moonlight walking tours, and an ancient heiau (temple).

Information taken from the Hawaii Visitors and Convention Bureau.

#### **Conference Registration**

Save money by registering by **February 20, 2004**. Registration is required for all attendees and presenters. Badges are required for admission to all events.

The Full Conference Registration fee includes a copy of the abstract book, the CD-Rom Proceedings, and one ticket each to the Opening Reception and the Luau Banquet.

**Spouse/Guest Registration** includes admittance to the Spouse/ Guest Hospitality Room (Continental Breakfast served Monday-Wednesday), and one ticket each to the Opening Reception and the Luau Banquet.

NOTE: Additional tickets can be purchased at the ANS Registration Desk for the Opening Reception and the Luau Banquet.

#### **Registration Hours**

The Conference Registration Desk and Message Desk will be located in the Hawaii Ballroom Foyer at the Sheraton Waikiki Hotel.

You may register, purchase tickets for events, or pick up your registration packet during the following hours:

Sunday, March 21, 2004 1:00 - 4:00 p.m.

Monday, March 22, 2004 7:00 a.m. - 4:00 p.m.

Tuesday, March 23, 2004 7:00 a.m. - 4:00 p.m.

Wednesday, March 24, 2004 7:00 a.m. - 4:00 p.m.

Thursday, March 25, 2004 7:00 a.m. - 2:00 p.m.

#### **Cancellations**

Registrations canceled prior to February 20, 2004, will be refunded minus a \$75 processing fee. Cancellations received after February 20, 2004, will NOT be refunded. However, you may send a substitute.

#### **Conference Proceedings**

This year's conference proceedings is available on CD-ROM. Copies of the Conference Proceedings will be available

on-site. Each full conference registrant will receive a copy of the proceedings as part of the full registration fee. Additional copies may be purchased at the conference registration desk for \$80.00. (This special price is available at the conference only.) To purchase copies following the conference, you may contact the ANS Accounting Department at 708-579-8210 (telephone), 708-579-8314 (fax), accounting@ans.org (email); or submit your request in writing to: American Nuclear Society, P.O. Box 97781, Chicago, IL 60678-7781. Copies of the proceedings are available for \$140 after the conference. Payment information must accompany all orders.

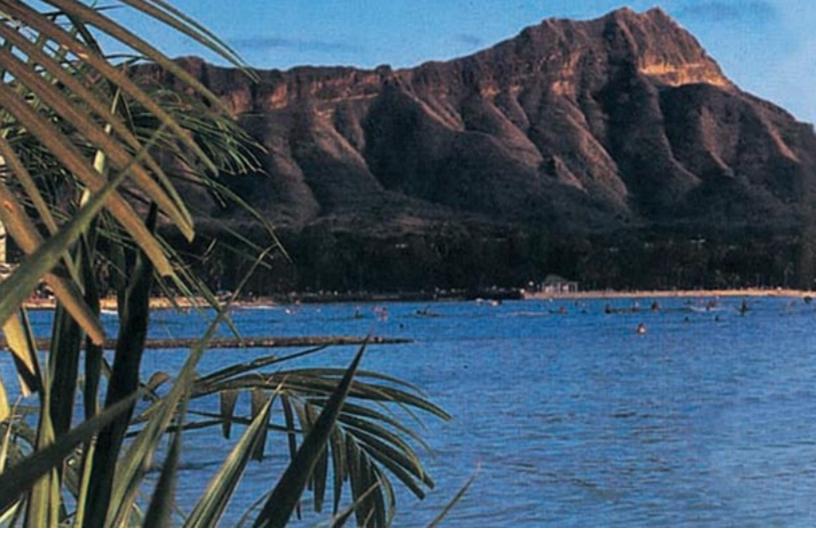
#### **VISAS**

For more than 50 years, the United States of America has required visas to study, visit, or conduct business in the U.S. While changes have been made recently to U.S. visa law, many procedures remain the same. To learn more, read the step-by-step guide to the visa process at the United states Visas Homepage at the following url: <www.unitedstatesvisas.gov>.

Apply Early! Recent changes in U.S. visa laws and regulations have increased the amount of time it can take to get a visa. Stricter security measures require more thorough checks and lengthen the visa application process but ensure the safety of visitors and U.S. citizens alike. Even with significant improvements being made in speeding up visa processing, it is inevitable that delays will sometimes occur. Processing times will vary. Please contact your nearest embassy or consulate for a current time estimate and planning recommendations, but to be on the safe side, we urge you to apply THREE months in advance.



Downtown Honolulu



2004 PBNC: Special Events and Optional Tours



# **OPENING RECEPTION Sunday, March 21, 2004**

One ticket is included in the full meeting registration fee. You can purchase additional tickets in advance or at the ANS Registration desk.

**Additional Ticket Price: \$50** 



## DELUXE LITTLE CIRCLE ISLAND TOUR Monday, March 22, 2004

This half day 60-mile tour reveals Hawaii's natural sites people fall in love with. Lush tropical rainforest, rocky cliffs with incredible blue Pacific Ocean surrounding you. You'll stop at Diamond Head Crater, Hanauma Bay, Pali Lookout, Nuuanu Valley and Makapuu Lookout. Come and join us to capture picturesque views of O'ahu.

Ticket Price: \$23

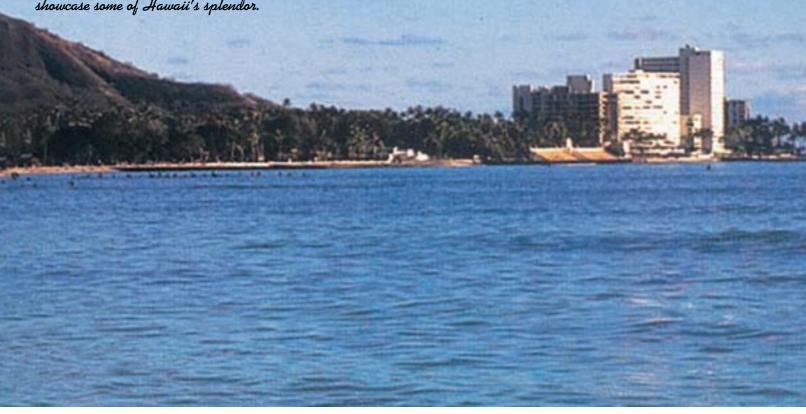


## LUAU BANQUET Monday, March 22, 2004

One ticket is included in the full meeting registration fee. You can purchase additional tickets in advance or at the ANS Registration desk.

**Additional Ticket Price: \$80** 

When ancient navigators first crossed the Pacific by a compass of stars, they found a place of celestial beauty. Today, Hawaii's sun-blushed vistas — from ivory sand and luminous blue water to jade rainforests and mountains dripped in mist — still draw travelers from around the world. And as the thriving islands attest, the incomparable setting inspires business as well as pleasure. After listening to and giving presentations, participate in the special events that we have planned to showcase some of Hawaii's splendor.





### ARIZONA MEMORIAL AND HONOLULU HISTORICAL TOUR Tuesday, March 23, 2004

Relive the dramatic events of Pearl Harbor as you visit the National Park Visitor's Center historical exhibits and film documentary. Board the Navy shuttle for a short ride to the Arizona Memorial where you will see the sunken remains of the USS Arizona.

The tour will continue with a historical tour of Downtown Honolulu, past Chinatown, Iolani Palace, State Capital and Governor's Mansion, and the Punchbowl Cemetery.

Ticket Price: \$23



## STAR OF HONOLULU -HAWAIIAN LUNCHEON CRUISE Wednesday, March 24, 2003

Feel the warmth of Hawaiian hospitality as you sail in turquoise waters under blue skies along Waikiki Beach, along Diamond Head, Waikiki and City Coastal areas. A hawaiian style buffet luncheon will be served.

Special Bonus: The cruise takes place during Whale Watch Season (December 15 - April 30).

Ticket Price: \$42



### DINNER AND SHOW AT CHAI'S ISLAND BISTRO Wednesday, March 24, 2003

Welcome to Chai's Island Bistro
located in beautiful Honolulu, Hawaii.
An exquisite dining experience
awaits you with award winning,
Hawaiian Regional Pacific Rim Cuisine
and its beautiful surroundings.
Chef & owner Chai Chaowasaree has
created a feast for all senses.
His innovative, Pac-Rim Cuisine
draws from the bounty of
Hawaii's harvest - both on land and sea.
Chai's Island Bistro is the place
to find Hawaii's hottest musicians
with nightly performances.

Ticket Price: \$65

#### **Technical Sessions**

#### MONDAY, MARCH 22, 2004, 8:30 A.M.

Opening Plenary: "New Technologies for a New Era: Setting the Stage," All invited.

#### **SPEAKERS:**

- The Honorable E. Gail de Planque, Strategy Matters, Inc. (Former Commissioner, NRC), Honorary Chair, 14 PBNC
- Glenn McCullough, TVA, Honorary Chair, 14 PBNC
- · Mohamed ElBaradei, Director General, IAEA
- Luis Echavarri, Director General, OECD/NEA
- The Honorable Greta Dicus, International Commission on Radiation Protection (Former Commissioner, NRC)

#### MONDAY, MARCH 22, 2004, 1:00 P.M.

Monday Afternoon Plenary: "Looking Ahead: Developing a New Generation of Advanced Nuclear Reactor and Fuel Cycle Technologies," All invited.

#### SPEAKERS:

- · Helen Leiser, Policy Director, Generation IV International Forum
- USDOE Speaker (invited)
- Yoiichi Fujiie, Chairman, Japan Atomic Energy Commission
- Mikhail Solonin, Deputy Minister, Minatom
- · Chang-Sun Kang, Seoul National University
- Yuanhui Xu, Tsinghua University

#### TUESDAY, MARCH 23, 2004, 8:30 A.M.

Tuesday Morning Plenary: "Near-Term Nuclear: The Challenges of our Future," All invited.

#### SPEAKERS:

- · Rixin Kang, President, China National Nuclear Corporation (invited)
- Don-Rack Chung, President and CEO, Korea Hydro & Nuclear Power Co.
- Representative from TEPCO, Japan (invited)
- Robert Van Adel, President and CEO, AECL
- Representative from U.S. Utility (invited)

Other speakers to be invited/determined.

#### TUESDAY, MARCH 23, 2004, 1:00 P.M.

Public Information and Outreach—I: The Theory and Methods of Nuclear Communications—Panel, All invited.

The presentations in this session should give the audience some general ideas of methods of communications applicable in the nuclear domain.

PANELISTS FROM THE FOLLOWING ORGANIZATIONS ARE BEING INVITED:

- · Tsinghua University
- Chinese Nuclear Society
- Gakushuin University
- First Energy
- Tokyo Electric Power Company
- Nuclear Service Company
- Bisconti Research, Inc.

#### **Integral Analysis**

MAAP4 Benchmarking of AP600 OSU Experiments, Chan Y. Paik, Robert J. Hammersley (Fauske & Assoc), James H. Scobel (Westinghouse)

Condensation Pool Performance, Ed Ingram (SNC), Bill Berger, Bob Reeves (Fauske & Assoc)

CVTR Revisited, Robert E. Henry (Fauske & Assoc)

Improved Plant Analysis Through Integrated Models, Robert J. Hammersley (Fauske & Assoc), Steven D. Thomas (Nucl Mgmt Corp)

Benchmarking of LOFT ATWS Experiments with MAAP4 Using a Point Kinetics Model, Chan Y. Paik, Robert E. Henry (Fauske & Associates), Robert J. Lutz (Westinghouse)

The Influence of a Steam Generator Feedwater Control Scheme on the Integral Response of the MAAP Code, Christopher E. Henry, William E. Berger (Fauske & Associates)

Response of the Davis-Besse Backup Boron Mixing System, R. E. Henry (Fauske & Assoc), T. Lang, D. Blakely (First Energy)

SG Tube Rupture Timing of Operator Actions, Doug Gaynor (Entergy Nucl Northeast), Bill Berger, Chris Henry (Fauske & Assoc)

#### Design, Engineering, and Construction of Nuclear Power Plants

Heat Transfer Augmentation and Recirculation Speed by Break-Jets in Large Enclosure Volumes, Fenglei Niu (Univ of California, Berkeley)

Off-Take Experiment at T-Junction Between Header and Feeder Pipes in CANDU Reactors, Manwoong Kim, Seon-Oh Yu, Hho-Jung Kim (KINS), Gi-Suk Hwang, Jae-Young Lee (Handong Univ)

Tracking of Microbubbles in a Turbulent Boundary Layer, Elvis Efren Dominguez Ontiveros, Yassin A. Hassan (Texas A&M)

Safety Assessment with No Time Delay Between Turbine Trip And Loss of Offsite Power, JaeDon Choi (KNFC)

Water Hammer Problem of Reactor Core Isolation Cooling System, Shanlin Chow (Taiwan Power Co.)

Design Study on 300MWe Class Small Modular BWR, Hideaki Heki (Toshiba Corp.), Takhiko Hida (JAPCO)

POWRTRAK for Information and Configuration Management, Peter P. Majerle (Black & Veatch)

EPR: An Evolutionary Advanced Reactor for a New Nuclear Era, Denis Mosser, P. Felten (Framatome ANP)

#### **High-Level Waste Management**

Suitability of Zhisin Clay as a Buffer Material for Deep Geological Repository—Study on Swelling Behavior, Wen-Chuan Chen (AEC)

High Level Waste Tank Gamma Profiling, Frank S. Moore (Westinghouse, SRC)

Generation-IV Reactors and Nuclear Waste Minimization, Ehud Greenspan (Univ of California)

Radioactive Waste Management and Environmental Remediation—"A New Perspective on a Lifetime of Experience", Shaun K. Cotnam, David W. Marinacci (AECL)

The Study on the Evolution and Major Turning Point of HLW Disposal Policy in Several Countries, Shigenobu Hirusawa, Seishi Torikai (The Inst of Applied Energy), Neil J. Numark (Numark Assoc)

Status and Prospect of R&D on Partitioning and Transmutation in Korea, Jungmin Kang, Kune Yull Suh (Seoul Natl Univ)

#### **Advanced Water-Cooled Reactors**

Safety and Reliability of an Integral Reactor—SMART, Moon Hee Chang (KAERI)

The Supercritical Water Cooled Reactor: Technical Challenges and Ongoing Research and Development, Jacopo Buongiorno (INEEL)

Reduced Moderation BWR with Advanced Recycle System (BARS), Kouji Hiraiwa, Kenichi Yoshioka, Miyuki Akiba, Yasushi Yamamoto, Mitsuaki Yamaoka, Nobuaki Abe (Toshiba Corp.), Junji Mimatsu (Gifu Univ)

CANDU and Generation IV System, Basma Anis Shalaby (AECL)

Integrated Modular Water Reactor (IMR), Development for Practical Application in the Near Future, Kenji Takano, Takashi Kanagawa (MHI), Akimi Serizawa (Kyoto Univ), Tetsuo Matsumura (CRIEPI), Toyoaki Yamauchi (JAPCO)

Fuel Cycle Flexibility in the ACR, Peter G. Boczar, Gary R. Dyck (AECL)

ACR Modularization, Ed Choy (AECL)

ACR For Oil Sands, Sermet Kuran, Jerry M. Hopwood, David Bock, Helmut Keil, Lisa Fiorino, Ken Hau, Brian Rolfe, Moshe Tankus, Tracy Zhou (AECL), R. B. Dunbar (Canadian Energy Research Inst), Alistair Miller (AECL)

#### **Activation Analysis Applications**

The Application of Prompt Gamma Neutron Activation Analysis (PGNAA) Borehole Logging for Copper Grade Estimation at Anglo American Copper Mines in Chile, Jacek Charbucinski (CSIRO, Exploration and Mining), Alan Webb (Anglo American Chile), Mark Berry, Andrew Rojc, Craig Smith (CSIRO, Exploration and Mining)

Use of PGNAA for Analysis of Boron-10 in Integral Fuel-Burnable Absorber Nuclear Fuel Pellets, Abdul R. Dulloo (Westinghouse)

Neutron Activation Analysis of Texas Rio Grande Valley Soils, Mohammad A. Hannan (Univ of Texas-Pan American)

Optimising Activatable Tracers for Cohesive Sediment Transport Studies in Contaminated Estuaries, Peter L. Airey, Ron Szymczak, Suzanne Hollins, Tymothy Payne (ANSTO)

Comparison of Measured and Calculated Prompt Gamma Ray Yields and Spectra for Verification of MCNP5, William S. Charlton (Texas A&M), Steven Biegalski, Taylor Green (Univ of Texas), George Sayre (Texas A&M Univ), Sheldon Landsberger (Univ of Texas)

Determination of Radium Activities in Pipe Slurries, Michael E. McIlwain (INEEL)

#### Research Reactors and Their Applications—I

Development of NTD Silicon Irradiation Calculating Program in SPRR-300, Wei Chen (CAEP)

Applying New Methods to Research Reactor Accident Analysis, David Diamond, Lap-Yan Cheng, Albert Hanson, John Carew (BNL)

JOYO MK-III, a State-of-the-Art FBR Irradiation Test Facility, Hiroshi Hara, Takafumi Aoyama (Japan Nuclear Cycle Development Inst)

Method of Characteristics Versus Monte Carlo Techniques in Research Reactors Modeling, Tatjana Jevremovic, Yefei Peng (Purdue Univ)

Comparison of Performance Degradation of Commercially Available DAC ICs in Mixed-Radiation Environment, Sukesh K. Aghara (Univ of Texas, Austin), Rainer J. Fink, James A. Ochoa, Jay R. Porter (Texas A&M)

Accident Analysis of the 3-Pin Fuel Test Loop in HANARO, Su-Ki Park, Chung-Young Lee, Dae-Young Chi, Bong-Shick Sim, Kook-Nam Park, Cheol Park, Young-Jin Kim (KAERI)

The Calculation and Measurement of Source Term of Spent Fuel Elements in SPRR-300, Wei Chen, Junlong Dai Sr., Zhiyong Hu, Rui Yang (CAEP)

#### Safety Culture

Anchoring Safety Culture in Operating Organizations, Jeffrey D. E. Jeffries (Paradigm Consult Svs)

Overcoming the Challenges of Changing Safety Methodologies in Nuclear Facilities, Ronald E. Wieneke, James F. Kleinsteuber, James J. Balkey (LANL)

Establishing Tactics for Reducing Accident Rates in Nuclear Facilities by Evaluating Safety Observation Data, Ronald E. Wieneke, James F. Kleinsteuber, James J. Balkey (LANL)

Independent Assessment in a Learning Organization, John C. Krane (Bruce Power)

Striving for Safety Excellence in Chemical and Glovebox Environments, Maryrose L. Montalvo, Crestina Vigil (LANL)

#### TUESDAY, MARCH 23, 2004, 4:00 P.M.

Tuesday Special Session: "Nuclear Hydrogen," All invited.

#### SPEAKERS:

- Linden Blue, Senior Vice President, General Atomics (invited)
- Thomas A. Christopher, President and CEO, Framatome ANP, Inc. (invited)

Other speakers to be determined.

#### WEDNESDAY, MARCH 24, 2004, 8:30 A.M.

Wednesday Morning Plenary: "New Developments in Nuclear Technology Applications," All invited.

#### **SPEAKERS:**

- U.S. Speaker (invited)
- · Gerald Grandey, President, Cameco Corp., Canada
- · Jose Abriata, President, Argentine National Atomic Energy Commission
- Ron Cameron, ANSTO, Australia
- Juan Eibenschutz, Director General, Comision Nacional de Seguridad Nuclear y Salvaguardias
- Min-Shan Ouyang, Minister, Atomic Energy Commission, Taiwan
- · Somporn Chongkum, Nuclear Society of Thailand
- Indonesian Speaker (invited)

#### WEDNESDAY, MARCH 24, 2004, 1:00 P.M.

Public Information and Outreach—II: How to Communicate with the Public-Panel, All invited.

This session deals with a variety of communication styles and media, ranging from a mouth-to-mouth communication through old mass media to the Internet.

#### PANELISTS FROM THE FOLLOWING ORGANIZATIONS ARE BEING INVITED:

- Federation of Electric Power Companies
- Electricite de France
- American Nuclear Society
- · Opinion Group for Energy Issues

#### Adaptive Responses Following Low-Dose Radiation Exposure—I

Low Doses of Radiation Reduce Risk in Vivo, Ron E. Mitchel (AECL)

What Becomes of Nuclear Risk Assessment in Light of Radiation Hormesis? Jerry Cuttler (Cuttler & Assoc)

Cancer Control Related to Stimulation of Immunity by Low Dose Radiation, Shu-Zheng Liu (Radiobiology Rsch Unit)

DOE Program, Developing a Scientific Basis for Responses to Low-Dose Exposures: Impact on Dose-Response Relationships, Antone L. Brooks (Washington State Univ)

Enhancement of Bio-Protective Functions by Low Dose/Dose-Rate Radiation, Kazuo Sakai (CRIEPI)

The Adaptive Response and Protection Against Fetal Malformation, Douglas R. Boreham (McMaster Univ)

#### **International Cooperation in Nuclear Technology**

Conceptual Design of the Chernobyl New Safe Confinement, Eric A. Schmieman (PNNL), Phillipe Convert (EdF), Matthew Wrona (Bechtel), Vladimir Rudko (KSK), Michael Durst (Battelle)

Protection from Potential Exposure for the Chernobyl New Safe Confinement, Dillard B. Shipler, Douglas Timmins (PNNL), Vladimir Rudko, Valery Batiy (KSK (ISTC)), John P. Schmidt, Eric Schmieman (PNNL)

Chernobyl Deconstruction ALARA Analysis, Dillard B. Shipler (PNNL), Valery Batiy, Leonid Povlosky (KSK (ISTC)), John P. Schmidt, Eric Schmieman (PNNL)

Radiation Accident Analysis for the Chernobyl New Safe Confinement, James Van Ramsdell Jr., Bruce A. Napier, Douglas Timmins (PNNL)

Construction of CANDU® in China: An International Success, Ken Petrunik (AECL)

Air Condensation of the Chernobyl New Safe Confinement, Yasuo Onishi, Satoru T. Yokuda (PNNL), Mark J. Zheleznyak, Oleg V. Voitsekhovitch (IMMSP)

International Collaboration to Study the Feasibility of Implementing the Use of Slightly Enriched Uranium Fuel in the Embalse CANDU® Reactor, Benjamin Rouben, Hank C. Chow, Laurence K. J. Leung, Wayne Inch (AECL), Jose Fink, Carlos Moreno (Nucleoelectrica Argentina S.A.)

Research and Education on Innovative Nuclear Engineering in 21st Century COE Program in Japan, Hiroshi Sekimoto (Tokyo Inst of Technol)

International Licensing—The ACR Approach, G. Rzentkowski (AECL)

#### Advanced Instrumentation and Control Systems—I

Experience of Maanshan Nuclear Power Plant Retrofit on 7300 Control System, Chuan-Chung Chen, Tsu-Chiao Chang (Taiwan Power Co.)

The KNICS Approach for Systematic V&V of Safety Software, Kyungho Cha (KAERI)

Cost-Benefit of Digital Controls Upgrades at Nuclear Power Plants, Roy Raychaudhuri, Thomas J. Behringer (Sargent & Lundy)

Autonomous Control for Generation IV Nuclear Plants, Richard T. Wood, C. Ray Brittain, Jose March-Leuba, James A. Mullens, John S. Neal (ORNL)

Application of Spectral Characteristics of Neutron Field for Vapor Content (Coolant Density) Monitoring in a Power Boiling-Water Reactor, Mikhail Mitelman, Vladimir Durnev, Valery Trotsenko (Inkor Ltd)

On Concepts of Man-Made Safety, Mikhail Mitelman, Boris Volik, Vladimir Durnev (Inkor Ltd)

Provision of Pressure and Pressure Drop Sensors' Resistance to External Effects, Mikhail Mitelman, Dmitri Vorobiev, Vladimir Durnev (Inkor Ltd)

Aluminum Nitride Based In-Core Power Monitor, David E. Holcomb (ORNL), Byung-Soo Moon (KAERI), Don W. Miller (The Ohio State Univ)

#### **Computer Codes and Methods**

Critical Issues from Licensing of ATRIUM-10 Fuel at Taiwan Power Company's BWR Units, Ping-Hue Huang (Taiwan Power Co.), Lih-Yih Liao (INER)

Core Damage Progression Induced by SBO in Qinshan NPP Unit 1 and Preventive SAM Measures, Xuewu Cao, Yiquan Xu, Yun Su (Shanghai Jiao Tong Univ)

Lower Head Creep Rupture Failure Analysis Associated with Alternative Accident Sequences of the Three Mile Island Unit 2, Sang Lung Chan (Swiss Federal Inst of Techol Zurich and Swiss Federal Nuclear Safety Inspectorate)

BWR Limit Cycle Determination Using Linear/Non-Linear Noise Analysis, Rogelio Castillo Duran, Javier Ortiz Villafuerte, Gustavo Alonso (Instituto Nacional de Investigaciones Nucleares)

Mathematical Model of SPND with Rhodium Emitter and Delay Correction Algorithms, Valery I. Buriyan (SNIIP-ATOM), Ludmila V. Kozlova, Alexander S. Kuzhil, Vladimir F. Shikalov (Kurchatov Inst)

Benchmark Solutions for Unstructured Geometry Transport Problems, Zarko Stankovski (CEA)

Development of a Program to Convert CAD files to an MCNP Format, Randy Schwarz (Visual Editor Consult), Leland Carter (Carter Monte Carlo Analysis, Inc.)

Creation of a New Linux Version of the Visual Editor, Randy Schwarz (Visual Editor Consult), Leland Carter (Carter Monte Carlo Analysis, Inc.)

#### **Nuclear Fuel Design and Management**

Development of the FETMA Code for Thermo-Mechanical Analysis of Fuel Elements, Hector Hernandez Lopez, Javier Ortiz Villafuerte (Instituto Nacional de Investigaciones Nucleares)

Development of a Methodology for Nuclear Fuel Cycle Cost Analysis, Juan Luis Francois, Ruben F. Ortega (Universidad Nacional Autonoma de Mexico)

BWR Local Peaking Factor Calculation Using the Linear Reactivity Model, Edmundo Del Valle (Instituto Politecnico Nacional), Gustavo Alonso, Arturo Delfin (Instituto Nacional de Investigaciones Nucleares)

Introduction of Advanced 16x16 and 17x17 Fuel Assemblies into Korean PWRS, Steve King (Westinghouse), Kyeong-Lak Jeon (KEPCO Nucl Fuel Co.), Ron Knott (Westinghouse), Roberto Esteves (Industrias Nucleares do Brasil)

Optimization of BWR Control Rod Patterns Using a Tabu Search Technique, Alejandro Castillo (Insituto Nacional de Investigaciones Nucleares), Luis Bernardo Morales (Universidad Nacional Autonoma de Mexico), Juan Jose Ortiz, Gustavo Alonso (Instituto Nacional de Investigaciones Nucleares), Edmundo Del Valle (Instituto Politecnico Nacional)

Performance of M5TM Alloy as Cladding Tube and Structural Component Material, J. P. Mardon (Framatome ANP), M. Bordy (SAS)

Inert Matrix Fuel for Plutonium Disposition, James Tulenko, Michael Savela (Univ of Florida)

A Role of Texture and Grain Boundary Structure in Controlling Diffusion During Oxidation, and Hydrogen Ingress in Zirconium Alloys, Hualong Li, Jerzy Szpunar (McGill Univ)

#### **Decommissioning of Nuclear Facilities**

Decommissioning of Nuclear Facilities at the Institute of Nuclear Energy Research of Taiwan, R.O.C., Yung-Chien Tong, Chung-Jyi Wu, Li-Fu Lin (INER)

A Brief History of Early Decommissioned Reactors, Thomas S. LaGuardia (TLG Svc)

A Study on Source Term Assessment of the TRIGA Mark-III Research Reactor Concrete Shield, Sanghwa Shin, Gwangtae Joo (Korea Industrial Testing Co.), Jooho Whang (Kyunghee Univ)

Removal of Uranium Compounds from Metallic Wastes Generated by Dismantling a Uranium Conversion Plant, Wang Kyu Choi (KAERI)

Technology Development for Commercial Nuclear Power Plant Decommissioning, Takeshi Ishikura, Daiichiro Oguri (NPEC)

Developments in the EPRI Decommissioning Technology Program, Christopher J. Wood, Sean Bushart (EPRI)

Regulatory Approach to Commercial Nuclear Plant Decommissioning, Where We've Been and Where We Go From Here, Lansing G. Dusek (PGE)

#### **Gas-Cooled Reactors**

Development of Pebble Bed Modular Reactor Power Plant, H. D. Matzner (PBMR Pty Ltd), A. K. Singh (Sargent & Lundy)

Multi-Module Pebble Bed Modular Reactor Plant Design, Anand K. Singh (Sargent & Lundy), W. Theron (PBMR Pty Ltd)

New Generation Nuclear Plant (NGNP) Project—Preliminary Point Design, Finis H. Southworth, Philip E. MacDonald (INEEL)

Multidimensional Steady State Simulation of a Pebble Bed High Temperature Gas Cooled Reactor Core, Yassin A. Hassan, Gokhan Yesilyurt (Texas A&M)

#### **Advanced Reactors: General**

Hydrogen Production from Nuclear Energy, Paul Pickard (SNL), David Henderson (DOE)

The Deep Underground Nuclear Park Concept: Issues of Safety, Economy, and Nonproliferation, Takahashi Hiroshi (BNL)

A Large Low-Pressure Advanced High-Temperature Reactor (AHTR), Charles Forsberg (ORNL)

Collimator Experiments for IEC-Based Spacecraft Propulsion, George H. Miley, Hiromu Momota, Robert Stubbers, Jason Webber, Linchun Wu, Hyung Jin Kim (Univ of Illinois)

#### THURSDAY, MARCH 25, 2004, 8:30 P.M.

Public Information and Outreach—III: Case Studies of Effective Communications—Panel, All invited.

This session will discuss strategies for and examples of effective public communication dealing with waste management and related issues.

PANELISTS FROM THE FOLLOWING ORGANIZATIONS ARE BEING INVITED:

- U.S. Nuclear Regulatory Commission
- Seoul National University
- Japan Nuclear Fuel Cycle Development Institute
- Nuclear Energy Institute

#### Adaptive Responses Following Low-Dose Radiation Exposure—II

Radiological Emergency Response: The National Biological Dosimetry Response Plan, Douglas R. Boreham (McMaster Univ)

Effects of Cobalt-60 Exposure on Health of Taiwan Residents Suggest New Approach Needed in Radiation Protection, W. L. Chen (National Yang-Ming Univ), Yuan-Chi Luan (Nuclear Science & Technol Assoc, Nuclear Biological and Chemical Protection Society)

In Vivo Mutagenic Effect of VERY Low Dose Radiation, Pamela J. Sykes (Flinders Univ of South Australia)

Radiation-Induced Bystander and Adaptive Responses in Cell and Tissue Models, Kevin Michael Prise (Gray Cancer Inst)

The Biological Response at Low Dose/Fluence Ionizing Radiation: Adaptive and Bystander Effects, Edouard Azzam (Univ of Medicine and Dentistry of New Jersey)

#### **Nuclear Reactor Safety: General**

Secure Energy Infrastructures: Nuclear Power Plant Security, Carolyn Delane Heising (Iowa State Univ), Eric Steinfelds (Univ of Missouri, Columbia)

The Second Generation of Taiwan's NPP Risk Monitor, TIRM-2, Tsu-Mu Kao, Chun-Chang Chao (INER)

U.S. NRC Alternative Reactor Accident Source Terms: Implementation Status and Issues, Jay Young Lee (NRC)

Periodic Safety Review as a Complementary Tool to Continuous Regulatory Surveillance, Heinz Peter Berg (Federal Office for Radiation Protection)

Risk-Informed Refueling Outage of Maanshan PWR Plant, Wei-Wu Chao, Hui-Min Wang (Atomic Energy Council)

Evaluation on ATWS Safety Analysis in Korea, Deog-Yeon Oh, Kun-Tae Kim, Bong-Hyun Kim, In-Goo Kim (KINS)

Environmental Management—Demonstrating Effective Control, John R. Harries (ANSTO)

Safety Assessment of Generic Safety Issues for CANDU-6 Reactors: Analyses of Moderator Heat Sink Integrity, Seon-Oh Yu, Manwoong Kim, Hho-Jung Kim (KINS), Churl Yoon, Byung Joo Min (KAERI)

## Commissioning, Operation, and Maintenance of Nuclear Power Plants

Porous Media Modeling on Criterion of Flash/Erosion Behaviors Inside Endplate/Tube Gap in Feedwater Heaters, Chunkuan Shih, Y. M. Ferng, P. Y. Chang (National Tsing-Hua Univ)

Application of Experience Feedback in the Commissioning of Qinshan CANDU Project, Fuming Jiang (Third Qinshan Nuclear Power Company, Ltd.), Yanhua Yang (Shanghai Jiao Tong Univ)

PWR Vessel Head Penetration Inspection and Safety Regulation in Taiwan, Ru-Tsung Sun, Wei-Wu Chao (Atomic Energy Council)

Aging Management of PWR Reactor Internals During the License Renewal Period, Robert E. Nickell (Applied Science & Technol)

Effects of Hydrogen Peroxide on Stress Corrosion Cracking of Stainless Steel in High Temperature Water, Shunsuke Uchida (Tohoku Univ)

NPP Performance Improvement through OPEX, Brian MacTavish (CANDU Owners Group Inc.)

A Review and Update of Ontario Power Generation's Program to Sustain Inprovements to its Nuclear Plant Performance, Raidis T. Zemdegs, Fred Dermarkar (OPG), Jordan Chou (Canadian Nuclear Utility Services)

Utilizing Plant Life Management Methodologies to Improve Capacity Factors, Saleem Azeez, Vaidyanathan Krishnan, James Nickerson, Das Scott (AECL)

#### **Spent Fuel Storage**

Critical Experiment Analysis of Neutron Absorbing Nickel-Chromium-Molybdenum-Gadolinium Alloy Being Considered for the Disposal of Spent Nuclear Fuel, David J. Loaiza, Rene G. Sanchez (LANL)

Dry Storage Technologies: A Real Asset for Spent Fuel Management, Alan Hanson (TRANSNUCLEAR INC), Jacques Besnainou (COGEMA), Laurent Blachet, Vincent Rolland (COGEMA LOGISTICS)

Current Status and Potential Benefits of Burnup Credit for Spent Fuel Transportation, Cecil Parks, John Wagner (ORNL), Carl Withee (NRC)

Criticality Analysis for Improvement of Spent Fuel Pool Storage Flexibility at Maanshan Nuclear Power Station, Ping-Hue Huang (Taiwan Power Co.)

#### **Radiation Protection: General**

The Application and Prospects of National Standards for Ionizing Radiation in Taiwan, Wen-Song Hwang, Hsiao-Fang Pang, Jih-Hung Chiu (INER)

Radiation Dose ALARA on Management Perspectives, Michael Jih-Sheng Chang (Taiwan Power Co.)

Radiation Protection in a Glovebox Environment: Behavior-Based Safety in a Plutonium Facility, Maryrose L. Montalvo, Crestina A. Vigil (LANL)

#### **Technical Sessions**

Iodine-131 Hospital Ward Contamination Event Handline Experence and Future Nuclear Medicine Control, Jehn-Ying Huang (Atomic of Energy Council of Chinese Taipei)

Recent Advances in Radiation Exposure Control at U.S. Power Plants, Christopher J. Wood (EPRI)

#### Liquid-Metal- and Gas-Cooled Fast Reactors

The Small Modular Liquid Metal Cooled Reactor: A New Approach to Proliferation Risk Management, Craig F. Smith (LLNL), Douglas C. Crawford (ANL-West), Michael W. Cappiello (LANL), Akio Minato (CRIEPI), John W. Herczeg (DOE)

Sodium-Cooled Fast Reactor Concept and Supporting Fundamental Researches, Kiyonobu Yamashita (Japan Nuclear Cycle Development Inst)

Promising Fast Reactor Systems in the Feasibility Study on Commercialized FR Cycle Systems, Yoshihiko Sakamoto, Yasuhiro Enuma, Masato Ando, Akira Nishikawa, Shoji Kotake, Yoshiaki Ieda (Japan Nuclear Cycle Development Inst)

Advanced Energy Conversion Systems for FBR, Toshio Nakagiri, Yoshitaka Chikazawa, Kazumi Aoto (Japan Nuclear Cycle Development Inst)

Whole Core Sub-Channel Analysis for LMR Passive Safety Analysis, Floyd E. Dunn (ANL), Dohee Hahn, Hae-Yong Jeong (KAERI), James E. Cahalan (ANL)

Liquid Metal MHD Devices for Space Application, Ivan Vitkovsky, Igor Kirillov, Anatoly Ogorodnikov (D.V. Efremov Inst)

Electromagnetic Pumps for Liquid Metal Nuclear Application, Igor Kirillov, Gennady Preslitsky, Anatoly Ogorodnikov, Ivan Vitkovsky (D.V. Efremov Inst)

Generation IV Nuclear Reactors: The Gas-Cooled Fast Reactor (GFR), Kevan D. Weaver (INEEL)

#### Advanced Instrumentation and Control Systems—II

The Robust Control of Nuclear Reactor, Yoon Joon Lee (Cheju Univ), Man Gyun Na (Chosun Univ), Ki Bog Lee, Byung Soo Moon (KAERI)

An Experimental Study on Continuous Stochastic Process for the Johnson Noise Thermometry, Byung Soo Moon, In-Koo Hwang (KAERI)

Development of an DNBR Monitoring Algorithm Using Fuzzy Neural Networks, Man Gyun Na, Sun Mi Lee, Sun Ho Shin, Dong Won Jung (Chosun Univ), Kibog Lee (KAERI), Yoon Joon Lee (Cheju National Univ)

The Design and Implementation of Advanced Digital CRCS, ChaeHo Nam (Doosan Heavy Industries & Construction Co., Ltd.)

On-Line Calculation of the Three Dimensional Core Power Distribution for the Monitoring of Safety Limits, Ki Bog Lee (KAERI), Man Gyun Na (Chosun Univ), Yoon Joon Lee (Cheju Univ)

Experience with Advanced Digital I&C on New NPPs and Major Backfittings, Thierry Zumbihl, Othman Salhi (Framatome ANP)

Model Predictive Load-Following Control for PWR Reactors, Man Gyun Na, Dong Won Jung, Sun Ho Shin, Sun Mi Lee (Chosun Univ), Jin Wook Jang, Kibog Lee (KAERI), Yoon Joon Lee (Cheju Univ)

The Analysis of Replacing Analog Control Circuit with Distributed Digital Control Equipment in a PWR Feedwater Control System, Shian-Shing Shyu, Yen-Chang Tzeng (INER), Chuan-Chung Chen, Tsu-Chiao Chang (TPC)

Analysis of the Impact of Wireless Technologies on Safety-Related I&C Systems, Paul D. Ewing (ORNL)

#### **Innovations in Nuclear Education and Training**

Start-up of a Nuclear Engineering Undergraduate Honours Degree Program in Canada, George T. Bereznai (Univ of Ontario Inst of Technol)

Using Linux in Compact Nuclear Simulator, Kyungho Cha (KAERI)

CNSC Development Program for the Recruitment of Young Engineers and Scientists, Amy Moore (Canadian Nuclear Safety Commission)

Effectively Managing Nuclear Risk Through Human Performance Improvement, Richard Coe (Richard Stocktan College of New Jersey)

An IEC Driven Sub-Critical Research Reactor, George H. Miley, Robert Stubbers, Linchun Wu, Hiromo Momota (Univ of Illinois)

Nuclear Engineering Distance Education Initiatives at The University of Tennessee, Harold L. Dodds (Univ of Tennessee)

Using Accreditation to Move Nuclear Training, Philip N. McCullough (INPO)

The Latest Training Support System of PWR Simulator in Japan, Yoshiki Ishikawa, Toshiharu Nakabayashi, Kohei Masuda (MHI)

#### THURSDAY, MARCH 25, 2004, 1:00 P.M.

#### Adaptive Responses Following Low-Dose Radiation Exposure—III

Suppression of Neoplastic Transformation in Vitro by Low Doses of Low LET Radiation, John Leslie Redpath (Univ of California, Irvine)

Non-Targeted Effects of Low-Dose Irradiation, William F. Morgan (Univ of Maryland, Baltimore)

Radiobiological Basis of Low Dose Irradiation in Prevention and Therapy of Cancer, Myron Pollycove (Univ of California, San Francisco)

Adaptive Response and Bystander Effects in Human and Non-Human Biota, Carmel Mothersill, Colin Seymour (McMaster Univ)

Development of an In Vivo Assay for Non-targeted Radiation, Colin Seymour, Carmel Mothersill (McMaster Univ)

Radiation and Health: An Overview of Radon Therapy in the United States and Europe, Barbra E. Erickson (California State Univ, Fullerton)

#### **Public Acceptance and Communication**

Significance of Controllable Nuclear Fuel Burning for Humanity, Hiroaki Wakabayashi (Ryutsu Keizai Univ)

By What Extent Can Nuclear Communicators Ameliorate the Nuclear Climate? Teruaki Ohnishi (The Wakasa Wan Energy Rsch Ctr)

How Safe is Safe Enough? Fred Boyd (Wild & Boyd Management Advisers Ltd.)

Communicating Nuclear Energy to the Public: The Philippine Experience, Justina Sergio Cerbolles, Rhodora Reyes Leonin (Philippine Nuclear Rsch Inst)

Public Support for License Renewal is Essential, Thomas S. Mullikin (Moore & Van Allen PLLC)

#### Nuclear Energy as a Sustainable Resource: Environmental Impacts

Comparative Assessment of Different Nuclear Options and Strategies for Electricity Generation in Mexico Using DECADES, Cecilia Martin Del Campo, Ruben F. Ortega, Juan Luis Francois (Universidad Nacional Autonoma de Mexico)

International Perspectives on the Role of Nuclear Power in Sustainable Development, Neil J. Numark (Numark Assoc), Herbert Feinroth (Gamma Eng Corp.)

Technical Approach of the Reasonable Nuclear Energy System for a New Era, Yoshihiro Nagaoki (Japan Nuclear Cycle Development Inst)

Long-Term Energy Forecast from Global Policy of  $\mathrm{CO}_2$  Constraint and Nuclear Power, Kazumi Ikeda (MHI), Hiroshi Ujita (The Inst of Applied Energy), Masanori Tashimo (Advanced Reactor Technol Co.), Hiroshi Sekimoto (Tokyo Inst of Technol)

# Improvements in Fire Assessment Methods for Risk-Informed Regulatory Activities

Improved Significance Determination Process (SDP) Methodology for Screening Fire Protection Inspection Findings, See-Meng Wong (NRC)

Current Status of Fire Protection Regulations for German Nuclear Power Plants, Heinz Peter Berg (Federal Office for Radiation Protection)

Risk-Informed/Performance-Based Fire Protection Regulation for Commercial Nuclear Power Plants, Paul William Lain (NRC)

Cable Failure Modes and Effects Risk Analysis Perspectives, Steven P. Nowlen (SNL)

Improved Technical Approach In the USNRC/EPRI Fire Risk Requantification Study, J. S. Hyslop (NRC), Robert P. Kassawara (EPRI), Steven P. Nowlen (SNL), Bijan Najafi (SAIC)

#### **Innovative Developments in Low-Level Waste Technology**

Identification and Disposition of PCB Oils from Equipment in a Nuclear Facility, Randy J. Martinez, Velma Y. Dominguez (LANL)

Decontamination, Decommissioning, and Disposal of Oversized Items at LANL's Plutonium Facility, Robert L. Dodge (LANL)

Study on the Radiological Assessment for the Proposal of the Vitrified Form Container of ILLW, Yong-Min Kim, Jae Hyuk Song, Chang Sun Kang (Seoul National Univ), Pyung Kook Ji, Jong Kil Park, Jong Hyun Ha, Myung Jae Song (Korea Hydro & Nuclear Power Co., Ltd./Nuclear Environment Technol Inst (KHNP/NETEC))

A Study on the Determination of Source Term and Shielding Analysis of Cold Crucible Melter (CCM) in Vitrification Facility for Low and Intermediate Level Radioactive Waste, Chang-Min Lee, Kun Jai Lee (KAIST)

Decontamination and Recycling of Radioactive Material from Retired Components, Christopher J. Wood (EPRI)

#### Research Reactors and Their Applications—II

Importance of Including Irradiation Rig Loading in Research Reactors Cycle Planning and Core Follow Calculations, Rian H. Prinsloo, Frederik Reitsma, Samuel Thugwane (NECSA (Nuclear Energy Corporation of South Africa)), Jesper Kierkegaard, Jenny Eliasson (Studsvik Nuclear AB)

3D Computer Model of Australia's Replacement Research Reactor, Robert M. Godfrey (ANSTO)

Safety Features of Australia's Replacement Research Reactor, Jack Dillich (ANSTO)

Australia's Replacement Research Reactor, Jack Dillich (ANSTO)

Scientific Opportunities for Research Using Neutron Beams at the Australian Replacement Research Reactor, R. A. Robinson, S. J. Kennedy (Bragg Inst)

The Australian Replacement Research Reactor—Seismic Ups and Downs, Ron Cameron (ANSTO)

#### **Business Environment and Nuclear Plant Economics**

PBNC—Business Environment and Nuclear Plant Economics—New Nuclear: Delivering on the Promise, Milton Caplan, Jerry M. Hopwood (AECL)

Study on Developing an Evaluation System of Advanced Nuclear Power Plants for Near Term Chinese Market, Mengjia Yang, Junsheng Ren (China Guangdong Nuclear Power Holding Company Technical Center), Zhiwei Zhou (Inst of Nuclear Energy Technol, Tsinghua Univ)

Rentability Study of an Electronuclear Power Reactor in Morocco: Case of a Large Size Unit, Bouhelal Oum Keltoum (National School of Mineral Industry)

American Centrifuge—'Back To The Future', Ron F. Green (USEC)

Participation of the Nuclear Power Plants in the New Brazilian Electric Energy Market, Sergio G. Mathias (ELECTRONUCLEAR)

# Medical, Industrial, and Agricultural Applications of Nuclear Technology

Radiotherapy Inverse Planning with Biased Multi-Objective Function Optimization, Youssef Shatilla (King Abdul Aziz Univ)

Isotope and Radiation Technology Application in Taiwan, Mei-Hsiu Liao, Lie-Hang Shen, Ying-Kai Fu (INER)

Advances in IEC Technology for a Portable Neutron/Proton Source, George H. Miley, Robert Stubbers, Yang Yang, Jason Webber, Yasser Shaban (Univ of Illinois)

Efficient Monte Carlo Electron Dose and Energy Spectra Computations for Medical Physics Applications, Anil K. Prinja (Univ of New Mexico), Brian C. Franke (SNL), Lee Harding (Univ of New Mexico)

Application of Probabilistic Risk Assessment Methodology to Medical Risk, Koichi Miyata, Yutaka Furuhama (TEPCO), Tatsuo Yanagawa (Nerima General Hospital)

Ionizing Radiation and Biological Tissues: A Certified Tissue Bank in Mexico, María Esther Martinez Pardo (Instituto Nacional de Investigaciones Nucleares)

A New Field of Nuclear Technology—Nuclear Transmutation Reactions in Solids, George H. Miley (Univ of Illinois)

#### **Progress in Codes and Standards**

Evaluation of Reliability of Design (R&D) Practices in Support of Regulatory Requirements, Eugene N. Sokolov (AECL)

Assessing the Impact of Electromagnetic Interference on Safety-Related I&C Systems, Paul D. Ewing (ORNL)

Establishing Radiation Protection Control System to Fulfill Radiation Safety Control, Jehn-Ying Huang (Atomic of Energy Council of Chinese Taipei)

Harmonization of Nuclear Codes and Standards—Pacific Nuclear Council Task Group Report, Shami Dua (AECL)

An Integrated Performance Based Management System for Nuclear Organizations, Shami Dua, H. Tamm, A. Aly (AECL)

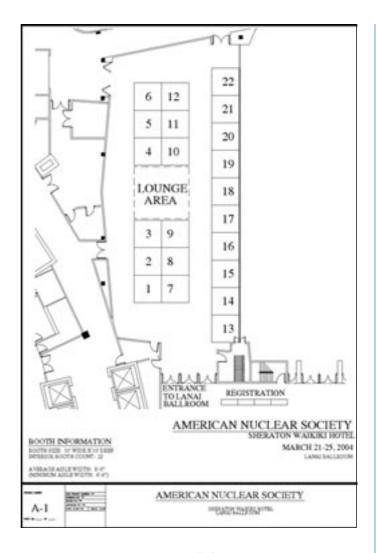
The Canadian Approach to Nuclear Codes and Standards, S. Azeez, Shami Dua (AECL), T. Shin (Canadian Standards Assoc)

Management System Requirements for Nuclear Power Plants—A New Standard for Canada's Nuclear Power Plant Industry—CSA N286, Rudi Abel (R&M Abel Consult Inc.)

#### THURSDAY, MARCH 25, 2004, 4:00 P.M.

#### **Closing Plenary**

Under development.



#### 2004 PBNC Technology Exhibitors (confirmed to date):

**Bechtel Power Corporation** 

**EXCEL Services Corporation** 

**Unitech Services** 

**Weed Instrument** 

#### **EXHIBITOR ADVANTAGES**

Two Complimentary Meeting Registrations including two Opening Reception Tickets, two Conference Dinner Tickets, a copy of the meeting proceedings on CD Rom and admittance to all technical sessions.

Two additional exhibit badges with tickets for the Opening Reception and Conference Dinner

Preliminary and Final Program Publicity

Pacific Basin Nuclear Conference Expo Guide

Meeting Attendee List

#### **BOOTH FEE AND EQUIPMENT**

\$3,500 US Dollars

Each booth will include:

- 10' x 10' Exhibit Space with 8' High Backwall and a 3' High Sidewall Drape in Show Colors
- 1 6' Skirted table and 2 Chairs
- 1 7" x 44" Company ID Sign
- 1 Wastebasket with Liner
- Existing Ballroom Carpeting

#### **SPONSORSHIP OPPORTUNITIES**

Receptions in the Exhibit Hall

Coffee & Reception Breaks

For more information on sponsorship opportunities, please contact David Slaninka in the ANS Meetings Department at 708/579-8255 or via email: dslaninka@ans.org.

#### **EXHIBIT HOURS**

SUNDAY, MARCH 21, 2004

7:00 a.m. - 3:00 p.m. • Exhibitor Set-Up 6:00 p.m. - 7:30 p.m. • Opening Reception

MONDAY, MARCH 22, 2004 9:00 a.m. - 5:00 p.m.

TUESDAY, MARCH 23, 2004 9:00 a.m. - 5:00 p.m.

WEDNESDAY, MARCH 24, 2004 8:00 a.m. - 12:00 p.m. 12:00 p.m. - 6:00 p.m. • Exhibitor Tear-Down

#### **RESERVE YOUR SPACE**

To reserve your space for the 14th Pacific Basin Nuclear Conference Technology Expo, consult the floor plan in this prospectus and indicate your preferred booth locations. Return the Contract for Exhibit Space with full payment to:

American Nuclear Society 555 North Kensington Avenue La Grange Park, IL 60526

Please mark the envelope Personal and Confidential to the attention of:

**ANS Meetings Department** 

or fax the Contract for Exhibit Space with credit card payment to: 708/579-8234

For additional information, contact David Slaninka in the ANS Meetings Department at 708/579-8255, or via E-mail: dslaninka@ans.org.

Exhibit space is limited and will be assigned on a first-comefirst served basis.

Visit our Web site at www.ans.org

### 14th Pacific Basin Nuclear Conference Technology Expo March 21 - 24, 2004 • Sheraton Waikiki Resort & Hotel, Honolulu, Hawaii

The undersigned reserves booth space in the 14th Pacific Basin Nuclear Conference Technology Expo, March 21 - 24, 2004, and agrees to all terms in the Expo Regulations and Information on the reverse side of this contract. Please complete and return this contract with full payment of \$3500.00 to American Nuclear Society, 555 North Kensington Avenue, La Grange Park, IL 60526. The return envelope should be marked Personal and Confidential and sent to the attention of David Slaninka. You may choose to fax the Contract for Exhibit Space with credit card payment to 708/579-8234, ANS Meetings Department.

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Email Address:			
Organization Representative #1: _ (Included with Technology Expo Fee)	Name	Title	
Organization Representative #2: _ (Included with Technology Expo Fee)	Name	Title	
Additional Exhibit Representative (Included with Technology Expo Fee)	#1:	Title	
Additional Exhibit Representative (Included with Technology Expo Fee)		Title	
furnished with 8' high backwall an	d a 3' high sidewal pment for your Ex	ate your three-desired booth location of the l	table and 2 chairs, and a 7" x 44" nternational Convention & Event
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Total Booth Fee: \$3500.00			
Payment Information			
Credit Card: □ Visa □ M	aster Card	□ American Express	□ Diners Club
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#### **Exhibit Information**

### 14th Pacific Basin Nuclear Conference Technology expo **REGULATIONS AND RULES**

#### CONTRACT FOR SALE:

The contract for the 14th Pacific Basin Nuclear Conference Technology Expo must be signed by a duly authorized agent of the Applicant and must be accompanied by the full payment for the booth of \$3500.00. Full payment is due by Friday, October 24, 2003. Until this payment is received, it is solely the option of the ANS to accept or reject the Contract for Exhibit Space. If payment is not received at the time the Contract for Exhibit Space is received, ANS reserves the right to cancel the exhibitors booth assignment and offer the space for resale. ANS reserves the right to relocate exhibitor(s) and/or modify the floor plan, when necessary.

#### **CANCELLATIONS OR REDUCTIONS:**

Any cancellation or reductions of exhibit space by the exhibitor, for any reason whatsoever, is subject to the following terms. If reduction of exhibit space is made on or before October 24, 2003, a refund of seventy-five percent of the booth fees will be made. Any reduction of exhibit space after October 24, 2003, will result in forfeiture of moneys paid and owed for the amount of space by which the exhibit area is reduced.

#### **BOOTH EQUIPMENT:**

The standard booth as furnished by ANS will consist of 8' high draped backwall, 3' high draped sidewalls, one skirted six foot table, two chairs, and an identification sign. Any additional requirements may be ordered through International Convention & Event Services (ICES).

#### OFFICIAL SERVICE CONTRACTOR:

International Convention & Event Services (ICES) is the Official Service Contractor for the 14th Pacific Basin Nuclear Conference Technology Expo. Each exhibiting company will be mailed the 14th Pacific Basin Nuclear Conference Technology Expo Service Manual which provides complete shipping instructions, production information and order forms for all services needed during installation, show period and removal from the exhibit.

#### INSTALLATION OF DISPLAYS:

The exhibit will be available for display set-up from 7:00 a.m - 3:00 p.m. on Sunday, March 21, 2004 ONLY. If it is necessary for an exhibitor to begin set-up on Saturday evening, please obtain permission from the ANS Exhibit Manager. Any expenses incurred due to early set up will be the sole responsibility of the exhibiting organization.

ALL DISPLAYS MUST BE FULLY SET UP AND READY BY 3:00 P.M., SUNDAY, MARCH 21, 2004. Any unattended booth with crated displays will be removed from the show floor and subsequent set-up of the booth will be the sole responsibility of the exhibiting organization and will take place after scheduled functions that day. Any costs incurred for storage of unattended display items or for the set up of the booth will also be the sole responsibility of the exhibiting organization.

#### DISMANTLING AND REMOVAL OF DISPLAYS:

Exhibitors may dismantle between 12:00 p.m. - 6:00 p.m. on Wednesday, March 24, 2004. Exhibitors should make prior arrangements to have their booth display and merchandise picked up no later than 6:00 p.m. on Wednesday, March 24. All exhibit displays or materials left in booths without instructions at that time will be shipped at the discretion of the ANS Exhibit Manager, and all applicable service charges will be applied to the exhibitor of record. **Dismantling of any displays before the close** of the Expo at 12:00 p.m. on Wednesday, March 24, 2004, is strictly prohibited.

#### STORAGE OF PACKING BOXES AND CRATES:

No empty boxes or crates may be stored in the booths. Provisions will be made for removal, storage and return of all packing material. Exhibitors are advised to provide locked facilities within their own display for excess merchandise.

#### SKILLED AND REGULAR LABOR:

ANS exhibit participants are expected to conform to local labor regulations, and the Official Service Contractor will supply labor at the prevailing rates for service required. In order to conform to union contract rules and regulations, it will be necessary that all exhibitors use qualified union personnel for the various services required for installation and dismantling of exhibits and for material handling within the show. Any installation of exhibits or displays which requires the use of hand tools, or more than one person, or longer than thirty minutes (including crating and un-crating) to install, or exceeds ten feet in any direction, shall be installed by employees or contractors of ICES. An exhibitor may move material that can be hand-carried by one person in one trip without the use of dollies, hand trucks, or other mechanical equipment.

#### PART-TIME EMPLOYEE PERSONNEL:

All personnel representing your company during the convention, whether full-time or part-time, must be officially registered and wear an official meeting/exhibitor badge. These badges may be allocated from your free registration allotment or as personnel who have paid the additional cost of the conference registration fees.

#### LIABILITY AND INDEMNIFICATION:

The exhibitor must surrender space occupied by it in the same condition as it was at the time the space was initially occupied. The exhibitor is responsible for all damage to the exhibit area, any and all claims and demands on account of any injury or death, or damage to property, in or upon the exhibitors booth space or elsewhere, because of the acts or omissions of exhibitors, its officers, employees, servants, agents, licensees or contractors; and exhibitors agree to hold harmless, ANS, ICES, the Sheraton Waikiki Hotel, its employees and agents from and against any and all liability, costs, claims and demands which may arise from or be asserted in connection with the foregoing undertakings and responsibilities of the exhibitors.

Neither ANS, ICES, the Sheraton Waikiki Hotel, their agents, servants, contractors or employees are liable for injuries to any persons, or for damage to property owned or controlled by the exhibitor, which claims for damages or injuries may be incidental to or arise from, or be in any way connected with the exhibitors occupation of display space or the acts or omissions of exhibitors officers employees, servants, agents, licensees, contractors or invitees, except for claims for damages or injuries caused by or resulting from the negligence of ANS, ICES, the Sheraton Waikiki Hotel, and their respective agents, servants, and employees.

#### SECURITY AND INSURANCE:

Guards will be furnished, but the furnishing of such guards shall not be deemed to increase the liability of ANS, its members, representatives, ICES, its employees, or the Sheraton Waikiki Hotel, its representatives and employees, or to modify in any way the assumption of risk and release provided for above. All property of the exhibitor is understood to remain under his custody and control, in transit to, within, or from the confines of the exhibit areas subject to booth regulations of the exhibit. Neither ANS, ICES the Sheraton Waikiki Hotel, their agents, servants, contractors nor employees are responsible for the safety of the property of exhibitors from theft, damage by fire, accident, vandalism, or other causes. EXHIBITORS ARE ADVISED TO CARRY FLOATER INSURANCE TO COVER BUSINESS INTERRUPTION AND PROPERTY DAMAGES, AS WELL AS TO COVER EXHIBITOR MATERIAL AGAINST DAMAGE AND LOSS AND PUBLIC LIABILITY INSURANCE AGAINST INJURY TO THE PERSON AND PROPERTY OF OTHERS.

#### USE OF SPACE:

All activities must be confined to the limits of the booth. No participant shall assign, sublet or share space allotted without the written consent of the ANS. No participant shall place a display in such a manner as to interfere with other booths. No display or construction shall exceed the height of the backdrop nor at this height shall it extend out from the booth backing to exceed more than one-half of the booth depth. No obstruction is allowed at the sides of booths, which may obscure the view of adjacent booths.

No firm or organization not assigned booth space will be permitted to disseminate technical and educational information or indulge in promotional activities in the ANS exhibit area. Booths shall be technically and educationally related to the purposes of ANS and/or the 14th Pacific Basin Nuclear Conference. The selling of merchandise or of orders within the ANS exhibit area shall not be permitted. Exhibitors agree to indemnify ANS and the Sheraton Waikiki Hotel for any costs, claims, penalties and demands which may arise from or be asserted by the Internal Revenue Service against ANS or the Sheraton Waikiki Hotel in connection with any activities which the Internal Revenue Service deems to constitute the selling of merchandise or the taking of orders within the ANS exhibit area.

Booths which include the operation of tapes, DVDs, sound motion pictures, PA systems or any noise making machines must be conducted so that the resulting noise will not annoy or disturb adjacent booths. It is the responsibility of the exhibitor to check with the ANS Exhibit Manager to be sure that his/her exhibit can be accommodated within the exhibit hall facilities.

#### RESTRICTIONS IN BOOTH OPERATIONS:

The ANS exhibit participant agrees to comply with the terms and conditions contained in this agreement. ANS and the Sheraton Waikiki Hotel reserve the right to restrict displays which because of the noise, materials, methods of operation or any other reason become objectionable, and also to prohibit activities or evict any participant whose booth, which, in the opinion of ANS or the Sheraton Waikiki Hotel, may detract from the exhibit as a whole. This reservation includes persons, things, conduct, printed matter or other, which ANS or the Sheraton Waikiki Hotel determine is objectionable or does not conform to the ANS exhibit standards. In the event of such restriction or eviction, ANS is not responsible for any refund, loss of business to the exhibitor or any other exhibit expenses.



## **ADVANCE REGISTRATION FORM**

# 14TH PACIFIC BASIN NUCLEAR CONFERENCE: "New Technologies for a New Era" March 21-25, 2004 • Sheraton Waikiki Resort & Hotel • Honolulu, HI

PLEASE PRINT OR TYPE			ANS Member #				
FIRST NAME:	Last Name:						
Company:			Title	E:			
Mailing Address			□ Company or □ Home				
CITY/STATE/ZIP:			_ Country:				
Telephone: Facsimile			Email:				
	14TH PACIF	IC BASIN NUCLEAR	R CONFER	ENCE REGIST	RATI	ON	
CD-Rom Proceedi	stration includes a copy of things, and one (1) ticket to e eception and the Luau Band	ach of the following	<b>Before February 20, 2004</b> (1) □ \$650		<b>AFTER FEBRUARY 20, 2004</b> (2) □ \$750		
Hospitality Room (	istration includes admittand (Continental Breakfast served to each of the following ever	d Monday-Wednesday),	(3) □ \$200				
OPTIONAL TICKETS: SPECIAL EVENTS AND TOURS Deluxe Little Circle Island Tour (Monday, March 22, 2004)		#/TICKETS			TOTAL \$		
Arizona Memorial & Honolulu Historical Tour (Tuesday, March 23, 2004)			(12) <b>X</b>	\$23		\$	
Star of Honolulu - Hawaiian Luncheon Cruise (Wednesday, March 24, 2004)			(13) <b>X</b> \$42			\$	
Dinner and Show at Chai's Island Bistro (Wednesday, March 24, 2004)		(14) <b>X</b> \$65			\$		
ADDITIONAL TICKETS*  Opening Reception (Sunday, March 21, 2004)			#/TICKETS (15) <b>X</b> \$50			Total \$	
Luau Banquet (Mon			(16) X		CI.	\$	
*Remember - One tic	cket for each of the above funct	ions is included in the full m	ieeting and spo	use/guest registratio	m. Chec	ck only if you a	ire ordering extra tickets.
GRAND TOTAL: \$	S						
METHOD OF PAY	MENT (CHECK ONE)						
☐ Check	□ VISA	☐ MasterCard		<b>J</b> American Exp	ress		Diners Card
Credit Card No			F	Exp. Date			
Authorized Signat	ture:						
NOTE: Please chec	ck here if special accommo	dations are required to	fully particip	ate. (ANS will co	ontact	you.)	

CANCELLATIONS: Registrations canceled prior to February 20, 2004, will be refunded minus a \$75 processing fee. Cancellations received after February 20, 2004, will NOT be refunded. However, you may send a substitute. Mail payment (payable to the American Nuclear Society) and the conference registration form to ANS Registrar, American Nuclear Society, P.O. Box 97781, Chicago, IL 60678-7781. If you are using a major credit card (VISA, MasterCard, American Express, or Diners Club), you may fax your registration to ANS Registrar at 708/579-8314 (ANS Registrar Telephone Number: 708/579-8316).

## HOTEL RESERVATION FORM

## SHERATON WAIKIKI HOTEL, HONOLULU, HAWAII

# 14th Pacific Basin Nuclear Conference "New Technologies for a New Era" March 21-25, 2004

RESERVATION DEADLINE: FEBRUARY 20, 2004

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#### **RESERVATION INFORMATION:**

\*Advance Reservations: 808-921-4611

\*THIS NUMBER IS OPERATIONAL BETWEEN THE FOLLOWING BUSINESS HOURS (HST):

8 A.M. - 5 P.M. (MONDAY - FRIDAY) • 8 A.M. - 4 P.M. (SATURDAY & SUNDAY)

RESERVATIONS FAX: 808-921-4697

\*\*REGISTER ONLINE AT: register.sheraton-waikiki.com
\*\*Type IN THE PASSWORD: PBNC

FOR RESERVATIONS, EITHER CALL OR SEND THIS FORM DIRECTLY TO THE HOTEL - DO NOT SEND THIS FORM TO THE AMERICAN NUCLEAR SOCIETY

GUEST NAMES(S):						
COMPANY:						
Mailing Address:						
CITY/STATE/ZIP:			Country:			
Telephone: Facsimile:						
Arrival Date:			Departure Date:			
PREFERRED ACCOMA	<b>AODATIONS</b>					
<b>Special Request</b>		Room Rates				
☐ SMOKING		MANOR WING ☐ \$95.00		SINGLE/DOUBLE*		
Non-Smoking		RUN OF CITY/MOUNTAIN VIEW	•	SINGLE/DOUBLE		
☐ HANDICAP ACCESSIBLE		RUN OF OCEAN VIEW	• • • • • • • • • • • • • • • • • • • •			
		ADDITIONAL PERSON	□ \$45.00			
		*There are a limited number of rooms in th main building. The rooms are smaller in Manor Wing rooms have no scenic views	size and cannot accom			
ADDITIONAL SPECIAL REQUES	STS:					
CHECK-IN TIME IS 3:00 P.M. ◆ CHECK-OUT TIME IS 11:00 A.M.		EXPECTED ARRIVAL TIME:				
METHOD OF PAYMEN	NT					
CREDIT CARD  AMERICAN EXPRESS	□ VISA	☐ Master Card	☐ DINERS CLUB	Discover		
CREDIT CARD NUMBER:			Expiration	Date:		
CARDHOLDER'S NAME:			Deposit An	10UNT:		
CARDHOLDER'S SIGNATURE:						

\*Rooms are subject to 11.41% tax, subject to change without notice. One night's deposit or credit card information must accompany reservation to guarantee room. (One night will be billed to your credit card.) Reservations must be made by February 20, 2004. After this date, reservations are subject to availability. Deposits are refundable if reservation is cancelled 72 hours in advance. NOTE: RESERVE YOUR ROOM EARLY. You will receive written confirmation of your reservation from the hotel.

#### PLEASE NOTE: RESERVE YOUR ROOM EARLY! RESERVATIONS MUST BE MADE BY FEBRUARY 20, 2004.

- RESERVATIONS RECEIVED AFTER THE DEADLINE DATE WILL BE SUBJECT TO AVAILABILITY AND WILL BE CHARGED AT THE HOTEL'S PREVAILING ROOM RATE.
- Your deposit guarantees your room. Please telephone changes to our Reservation Department at 808-921-4611.
- CHECK-OUT TIME IS 11:00 A.M., CHECK-IN TIME IS 3:00 P.M.