

**2008 International High-Level Radioactive  
Waste Management Conference**

*“Steps Toward Reality for Safe Disposal”*

**September 7-11, 2008 • Las Vegas, Nevada  
The Riviera Hotel and Casino**



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**OFFICIAL PROGRAM**

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# 2008 International High-Level Radioactive Waste Management Conference

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- Updated: August 27, 2008**
- 4**      **Conference Officials**  
Take a peek at who is planning the sessions for this successful conference.
- 5**      **Conference Information**  
Find out important information about hotel accommodations, meeting registration, the conference proceedings, the technical tour, and the social events that are scheduled.
- 6**      **Conference Schedule**  
Take a look at the listing of sessions by day.
- 6-11**    **Technical Sessions by Day**  
Catch a glimpse of a listing of the sessions by day—a comprehensive list of the technical papers/presentations for the 2008 International High-Level Radioactive Waste Management Conference.
- 12**     **Technical Tour Information**  
All technical tour participants must be pre-registered.

## Conference Officials

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# 2008 International High-Level Radioactive Waste Management Conference

*"Steps Toward Reality for Safe Disposal"*

### HONORARY CHAIR

Ward Sproat,  
U.S. Department of Energy

### GENERAL CHAIR

Budhi Sagar,  
Center for Nuclear Waste  
Regulatory Analysis

### TECHNICAL PROGRAM CHAIR

Stephen Turner,  
Terranear PMC

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### TECHNICAL PROGRAM COMMITTEE

Mike Bauser  
Allen Benson  
Asadul Chowdhury  
Carl Di Bella  
Bjorn Dverstorp  
Robert Einziger  
Charles W. Forsberg

William G. Halsey  
John Kessler  
Frank King  
Mark Kolbe  
Stefan Mayer  
Charles McCombie  
Tanya Montgomery

Vincenzo V. Rondinella  
James Scott  
Eric Smistad  
Abe Van Luik  
Sylvie Voinis  
Phil Wheatley  
Anders Worman

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### LEAD ORGANIZERS

#### Biosphere

Graham Smith, Mikael Jensen

#### Engineered Systems

Brady Hansen, Al Eddebarh, George Danko

#### Institutional Topics

Barry Butterfield, Daniel Bullen

#### Natural Systems

Cliff Ho, Stratis Vomvoris, Jude McMurry, Scott James

#### Other Topics

Leif Eriksson, Budhi Sagar, Eileen Supko

#### Regulatory Topics

Ray Clark, Steve Turner

#### Total Repository System

Sitakanta Mohanty, Andy Campbell, Mick Apted, Peter Swift

### ATTENDEES AT THE PAPER REVIEW AND SESSION ORGANIZATION MEETING:

Al A. Eddebarh, Abe VanLuik, Dan Bullen, Barry Butterfield, George Danko, Brady Hansen, Mark Kolbe, Steve Turner, Cliff Ho.  
Not shown: Ray Clark



# Conference Information

The conference is a forum for the discussion of the scientific, technical, social and regulatory aspects of the “back end” of the nuclear fuel cycle. These issues include waste generation, transportation, storage, treatment, disposal, and associated aspects (such as facility remediation, regulation, and stakeholder involvement). The conference is an opportunity for an exchange of information on current topics of interest among the international participants in nuclear-waste activities. The conference will appeal to an international audience as an opportunity to share information across programmatic, disciplinary, and international boundaries. Intended participants and audiences include personnel working on all aspects of irradiated fuel and HLW management such as: geologic waste-disposal systems, facility remediation systems, the governmental and private organizations using these systems, regulators, and those involved in scientific and societal issues related to policy questions for these systems.

## Sponsor

American Nuclear Society, with cooperation from numerous professional and technical societies, national laboratories, commercial and federal organizations throughout the world.

## Conference Registration

Registration is required for all attendees and presenters. Badges are required for admission to all events.

- The **Full Conference Registration Fee** includes admission to all technical sessions, the opening reception, the conference luncheon and the conference proceedings (CD-ROM)
- The **Daily Conference Registration Fee** includes admission to technical sessions on the day registered and the conference proceedings (CD-ROM)
- The **Student Registration Fee** includes admission to all technical sessions

*NOTE: Additional tickets can be purchased at the ANS registration desk for the opening reception and the conference luncheon.*

## Registration Hours

The ANS registration desk and message desk will be located at the East Desk of the Riviera Hotel and Casino. You may register, purchase tickets for events, or pick up your registration packet during the following hours:

SUNDAY, SEPTEMBER 7, 2008	1:00 PM - 4:00 PM
MONDAY, SEPTEMBER 8, 2008	7:00 AM - 4:00 PM
TUESDAY, SEPTEMBER 9, 2008	7:00 AM - 4:00 PM
WEDNESDAY, SEPTEMBER 10, 2008	7:00 AM - 4:00 PM

## Conference Proceedings

This year's conference proceedings is available on CD-ROM. Copies of the conference proceedings will be available on-site. Each full and daily conference registrant will receive a copy of the proceedings as part of the full and one-day registration fees. Additional copies may be purchased at the conference registration desk for \$175.00. To purchase copies following the conference, you may contact the ANS accounting Department at 708-579-8210 (phone); 708-579-8314 (fax); [accounting@ans.org](mailto:accounting@ans.org) (email); or submit your request in writing to: American Nuclear Society, 97781 Eagle Way, Chicago, IL 60678-9770. Payment information must accompany all orders.

## Speaker Registration and Preparation Room

All speakers are required to register for the conference in advance and to submit a registration fee. A Speakers' Preparation Room, located in the Capri 101 Room of the Riviera Hotel and Casino, will be in operation for the duration of the conference to serve the needs of speakers and moderators. Speakers and session chairs are requested to check-in at the speakers' desk located at the East Desk of the Riviera Hotel and Casino at least one day prior to their presentation.

## Technical Tour: Yucca Mountain and Nevada Test Site

DATE: Thursday, September 11, 2008  
TIME: Buses depart from the Riviera Hotel and Casino at 7:00 A.M. and return at 6:00 P.M.  
TOUR FEE: \$10 (includes box lunch)

### *Registration for the tour is closed!*

Yucca Mountain in Nevada, is the U.S. Department of Energy's proposed underground geologic repository for spent nuclear fuel and high-level radioactive waste. This event will give you the chance to speak with Project scientists and learn about future Project plans. While on tour you will visit the Project's Repository site and get a close-up look at the Tunnel Boring Machine that excavated this facility. You will also travel to the crest of Yucca Mountain for a scenic view of the area and receive a geology/hydrology briefing.

The Department of Energy (DOE), and its predecessor agencies the Energy Research and Development Administration and the Atomic Energy Commission, conducted nuclear tests and other experiments at the Nevada Test Site, which helped maintain world peace, and the national security of the United States.

Since the establishment of the Nevada Test Site in 1951, thousands of people from around the world – senior citizens to college students – have visited this vast outdoor laboratory that is larger than the state of Rhode Island, to see firsthand, artifacts and archaeological sites from the early settlers, to the many relics remaining from nuclear weapons tests, nuclear rocket experiments, and a variety of other defense, environmental, and energy-related programs.

Additional information can be found on page 12.

### *Please note:*

*There are no guaranteed clearances for Foreign National guests.*

## Social Functions

### OPENING RECEPTION

MONDAY, SEPTEMBER 8, 2008

5:00 PM – 7:00 PM

Location: Top of the Riviera

Each full conference registrant will receive a ticket for the reception. Additional tickets may be purchased on-site at the ANS registration desk for \$40.00.

### CONFERENCE LUNCHEON

TUESDAY, SEPTEMBER 9, 2008 • 11:30 AM – 1:00 PM

Location: Grande B

#### LUNCHEON SPEAKER:

“Geopolitics of Energy,”

James L. Conca, Ph.D. (*Director, Carlsbad Environmental Monitoring & Research Center, New Mexico State University*)

Each full conference registrant will receive a ticket for the luncheon. Additional tickets may be purchased on-site at the ANS registration desk for \$40.00.

# Conference Schedule

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## MONDAY, SEPTEMBER 8, 2008

**8:30 AM – 11:30 AM**

Opening Plenary

**1:00 PM – 4:00 PM**

Geochemical Studies and Geoscience

Waste Form Behavior—I

Post-Closure Safety Assessment

National Programs and Policies

**5:00 PM – 7:00 PM**

Opening Reception

## TUESDAY, SEPTEMBER 9, 2008

**8:30 AM – 11:30 AM**

Flow and Transport Processes

Waste Package Issues

Yucca Mountain Total System Performance Assessment

Institutional Issues

International Perspectives on Engineered Barriers

**11:30 AM – 1:00 PM**

Conference Luncheon

## TUESDAY, SEPTEMBER 9, 2008

**1:00 PM – 4:00 PM**

Yucca Mountain Flow and Transport Modeling

Waste Form Behavior—II

Uncertainty and Sensitivity Analyses

International Regulatory Issues

## WEDNESDAY, SEPTEMBER 10, 2008

**8:30 AM – 11:30 AM**

Site Characterization and Property Measurements—I

In-Drift Thermal-Hydrologic Environment

Facilities, Transportation, and Fuel Issues

Chemical Processes for Managing Wastes

**1:00 PM – 4:00 PM**

Site Characterization and Property Measurements—II

Engineered Systems Transport Processes

Challenges in Stakeholder Communication—Panel

Biosphere Topics

## THURSDAY, SEPTEMBER 11, 2008

**7:00 AM – 6:00 PM**

Technical Tour

# Technical Sessions

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## MONDAY, SEPTEMBER 8, 2008 • 8:30 A.M.

### Plenary

#### Grande A

*Session Chair:* Budhi Sagar (CNWRA)

The Plenary session will feature global leaders and policy-makers, regulators, implementers, and nuclear industry officials lead by Honorary Chair Ward Sproat, Director, U.S. Office of Civilian Radioactive Waste Management. The topics include the status of program milestones and updates on the strategies that consider technical, regulatory, societal, and economic issues.

#### PANELISTS:

- Ward Sproat (*Director, Office Radioactive Waste Management, US Department of Energy*)
- Jongwon Choi (*Director, HLW Disposal Research Division, Korea Atomic Energy Research Inst.*)
- Luis Echàvarri (*Director General, Nuclear Energy Agency (OECD-NEA)*)
- Francois-Michel Gunnot (*Chairman, Board of Directors, National Radioactive Waste Management Agency (Andra), France*)
- Claes Thegerström (*President, Svensk Kärnbränslehantering AB (SKB), Sweden*)

## MONDAY, SEPTEMBER 8, 2008 • 1:00 P.M.

### Geochemical Studies and Geoscience.

#### Capri 102

*Session Organizer:* Clifford Ho (SNL);

*Session Chairs:* Paul Reimus (LANL), Bill Arnold (SNL)

### 1:00 p.m.

Distribution of Natural Rare Earth Elements in Konrad Host Rock, Bernhard Kienzler (*Forschungszentrum Karlsruhe*)

### 1:30 p.m.

Yucca Mountain Region Groundwater Geochemical Data Analyses, Omar M. Al-Qudah, Arturo Woocay, John C. Walton (*Univ of Texas, El Paso*)

### 2:00 p.m.

Lead Isotopes and Trace Metals in Dust at Yucca Mountain, Leonid A. Neymark, Loretta M. Kwak, Zell E. Peterman (*USGS*)

### 2:30 p.m.

Applying Systematic Geosynthesis Methodology to Surface-Based Investigations in “Horonobe URL Project”, Japan, Koichiro Hatanaka, Naotaka Shigeta, Tatsuo Fukushima (*JAEA*)

### 3:00 p.m.

Site-Descriptive Modelling for Geoscientific Understanding of the Forsmark Site, Sweden, Kristina Skagius (*Kemakta Consultants AB*), Kaj Ahlbom (*SKB*), Johan Andersson (*JA Streamflow AB*), Anders Ström, Tobias Lindborg (*SKB*), Anders Winberg (*Conterra AB*)

### 3:30 p.m.

Geosynthesis: Application in Switzerland and Elsewhere—What's Next?, Efstratios (Stratis) Vomvoris (*National Cooperative for the Disposal of Radioactive Waste*), Christian Sprecher (*Sprecher Consulting GmbH*), Irina Gaus, Kenichi Kaku (*National Cooperative for the Disposal of Radioactive Waste*)



# Technical Sessions

## Waste Form Behavior—I.

### Capri 103

*Session Organizers:* Brady Hanson (PNL), George Danko (Univ of Nevada, Reno);  
*Session Chairs:* Fraser King (Integrity Corrosion Consulting), Lara Duro (AMPHOS)

#### 1:00 p.m.

Researches in Safety of Compacted Wastes and Spent Nuclear Fuel, V. Wasselin-Trupin (IRSN), C. Guipponi, N. Millard-Pinard (Univ de Lyon), E. Serris, M. Pijolat (Ecole Nationale Supérieure des Mines de Saint Etienne), N. Béreud (Univ of Lyon), C. Corbel (CEA), M. F. Barthe (CEMHTI-CNRS), P. C. Leverd (IRSN)

#### 1:30 p.m.

Testing Protocols for GNEP Waste Forms, W. L. Ebert (ANL)

#### 2:00 p.m.

High Burn-Up UO<sub>2</sub> Fuel Corrosion Under Reducing Conditions, Patrik Fors (Chalmers Univ of Technol/Inst for Transuranium Elements), Paul Carbol, Stefaan Van Winckel (Inst for Transuranium Elements), Kastriot Spahiu (Chalmers Univ of Technol)

#### 2:30 p.m.

Factors Affecting UO<sub>2</sub> Dissolution Under Geologic Disposal Conditions, Amanda Casella (Univ of Missouri-Columbia), Brady Hanson (PNNL), William Miller (Univ of Missouri-Columbia)

#### 3:00 p.m.

Neptunium Thermodynamics in a Geological Repository for Spent Nuclear Fuel, Judah I. Friese, Matthew Douglas, Brady D. Hanson, Rosara F. Payne, Matthew K. Edwards, Paula P. Bachelor (PNNL)

#### 3:30 p.m.

Examining the Conservatism in Dissolution Rates of Commercial Spent Nuclear Fuel, Brady Hanson (PNNL)

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## Post-Closure Safety Assessment.

### Capri 104

*Session Organizers:* Abe van Luik (DOE), Daniel Bullen (Exponent);  
*Session Chairs:* Abe van Luik (DOE), Nava Garisto (NWMO)

#### 1:00 p.m.

Broader Perspectives on the Yucca Mountain Performance Assessment, Peter N. Swift, Kathryn Knowles, Jerry McNeish, S. David Sevougian (SNL), Mark Tynan, Abraham van Luik (DOE)

#### 1:30 p.m.

A Peer Review of the Yucca Mountain IMARC Tool System Performance Assessment EPRI Model, N. C. Garisto (SENES), D. G. Bennett (TerraSalus), J. Andersson (JA Streamflow AB)

#### 2:00 p.m.

Safety Assessments for Licensing a Spent Nuclear Fuel Repository in Sweden, Allan Hedin (SKB), Johan Anderson (JA Streamflow AB), Ulrik Kautsky, Lena Morén, Raymond Munier, Jens-Ove Näslund (SKB), Karin Pers (Kemakta Konsult AB), Ignasi Puigdomenech, Patrik Sellin, Jan-Olof Selroos (SKB), Kristina Skagius (Kemakta Konsult), Kastriot Spahiu, Fredrik Vahlund, Lars Werme (SKB)

#### 2:30 p.m.

Regulatory Review of SKB's Dress-Rehearsal Safety Assessment for a Swedish Spent Nuclear Fuel Repository, Björn Dverstorp (SSI/SSM), Bo Strömberg (SKI/SSM)

#### 3:00 p.m.

Development of the CYPRUS Information System for Performance Assessment in HLW Disposal, Yongsoo Hwang, Mi Seon Jeong (KAERI)

#### 3:30 p.m.

Safety Assessment of a Glaciation Scenario—Preliminary Results, F. Garisto (NWMO), J. Avis (Intera Engineering), P. Lum, G. Kwong (NWMO)

#### 4:00 p.m.

Simplified Probabilistic Seismic Hazard Model for Yucca Mountain, Mark Stirling (GNS Science)

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## National Programs and Policies.

### Capri 105

*Session Organizers:* Barry Butterfield (HDR), Daniel Bullen (Exponent);  
*Session Chairs:* Barry Butterfield (HDR), Charles McCombie (Arius Assoc)

#### 1:00 p.m.

20 Years of HLW Repository Equipment Development in Germany From Conceptual Design to Full-Scale Demonstration of Waste Encapsulation, Handling, and Disposal, Enrique Biurrun, Bernt Haverkamp, Wolfgang Filbert, Wilhelm Bollingerfehr (DBE TECHNOLOGY GmbH)

#### 1:30 p.m.

Site Selection in Switzerland—The Sectoral Plan and Nagra's Responsibilities, Efratios (Stratis) Vomvoris, Piet Zuidema Lawrence Johnson (NAGRA)

#### 2:00 p.m.

High-Level Waste Management in Korea, Jongwon Choi (KAERI)

#### 2:30 p.m.

Effects of Future Deployment of Nuclear Power in the Netherlands, J. Hart, A. I. van Heek (NRG)

#### 3:00 p.m.

Impact of Nuclear Renaissance on Waste Management Programs: A South Africa Perspective, M. E. Makgae, Z. N. Hlatshwayo (PBMR)

#### 3:30 p.m.

IP FUNMIG: Achievements Within the European Far-Field Project, Bernhard Kienzler, Gunnar Buckau (Forschungszentrum Karlsruhe)

#### 4:00 p.m.

WIPP—A Safely Operating, Expandable, Proof of Principle for Deep Geological Disposal of Long-lived Radioactive Materials, George E. Dials (Babcock & Wilcox), Leif G. Eriksson (Consultant)

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## TUESDAY, SEPTEMBER 9, 2008 • 8:30 A.M.

## Flow and Transport Processes.

### Capri 102

*Session Organizer:* Clifford Ho (SNL);  
*Session Chairs:* James Scott (SNL), Anders Worman (KTH)

#### 8:30 a.m.

Scaling of Surface Water-Subsurface Water Interaction with Implication to Hydrogeological Site Evaluations, Anders Wörman, Lars Marklund (KTH), Shulan Xu, Björn Dverstorp (Swedish Radiation Protection Authority)

#### 9:00 a.m.

Groundwater Flow Through the Funeral Mountains, Death Valley National Park, California, John Bredehoeft (The Hydrodynamics Group), Chris Fridrich (USGS), Michael King (The Hydrodynamics Group)

#### 9:30 a.m.

Accommodating Transient Velocities in Time-Domain Particle Tracking Simulations of Radionuclide Transport, Scott Painter (Southwest Research Inst)

# Technical Sessions

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## 10:00 a.m.

Multiscale Analysis of Radionuclide Migration Using Markov Chain Models, Daisuke Kawasaki (*The Univ of Tokyo*), Joonhong Ahn (*Univ of California, Berkeley*)

## 10:30 a.m.

Semi-Analytical Solutions for the Pseudo-Colloids Migration in a Fractured Porous Matrix, Mi-Seon Jeong, Yongsoo Hwang (*KAERI*)

## 11:00 a.m.

Thermohydrological Behavior in Rock Pillars Between Emplacement Drifts at Yucca Mountain Repository, W. Zhou, M. Apted (*Monitor Scientific*), J. H. Kessler (*EPRI*)

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## Waste Package Issues.

### Capri 103

*Session Organizers:* Brady Hanson (*PNL*), George Danko (*Univ of Nevada, Reno*);  
*Session Chairs:* Sim Stroes-Gascoyne (*AECL*), Scott Gillespie (*Bechtel SAIC*)

## 8:30 a.m.

Analysis of Damage to Waste Packages Caused by Seismic Events During Post-Closure, Steven W. Alves, Stephen C. Blair, Steven R. Carlson, Michael Gerhard, Thomas A. Buscheck (*LLNL*)

## 9:00 a.m.

Microbial Impact on Selecting the Repository Sealing System Designs, P. Maak (*NWMO*), Sim Stroes-Gascoyne (*AECL*)

## 9:30 a.m.

The Impact of Microbiologically Influenced Corrosion on the Lifetimes of the Yucca Mountain Engineered Barrier System, Fraser King (*Integrity Corrosion Consulting*)

## 10:00 a.m.

Multipurpose Transportation, Aging, and Disposal Canisters for Used Nuclear Fuel—Capitalizing on the Lessons Learned, Rodney McCullum (*NEI*)

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## Yucca Mountain Total System Performance Assessment.

### Capri 104

*Session Organizer:* Peter Swift (*SNL*);  
*Session Chairs:* Peter Swift (*SNL*), Mick Apted (*Monitor Scientific*)

## 8:00 a.m.

Yucca Mountain 2008 Performance Assessment: Conceptual Structure and Computational Organization, J. C. Helton, C. W. Hansen, C. J. Sallaberry (*SNL*)

## 8:30 a.m.

Yucca Mountain 2008 Performance Assessment: Modeling Disruptive Events and Early Failures, S. David Sevougian (*SNL*), Alda Behie (*Areva Federal Services*), Veraun Chipman (*LLNL*), Michael B. Gross (*Beckman and Assoc*), Sunil Mehta (*Intera*), William Statham (*Areva Federal Services*)

## 9:00 a.m.

Yucca Mountain 2008 Performance Assessment: Modeling the Engineered Barrier System, R. J. MacKinnon, R. G. Baca (*SNL*), A. Behie (*Areva Federal Services*), Y. Chen (*Intera*), V. Chipman (*LLNL*), J. Lee (*SNL*), K. P. Lee (*Areva Federal Services*), P. D. Mattie (*SNL*), S. Mehta (*Intera*), K. G. Mon (*Areva Federal Services*), J. D. Schreiber, S. D. Sevougian, C. T. Stockman (*SNL*), E. D. Zwahlen (*Areva Federal Services*)

## 9:30 a.m.

Yucca Mountain 2008 Performance Assessment: Modeling the Natural System, Patrick D. Mattie, Teklu Hadgu (*SNL*), Barry Lester (*Geotrans*), Anthony Smith (*Areva Federal Services*), Maryla Wasiolek (*SNL*), Eric Zwahlen (*Areva Federal Services*)

## 10:00 a.m.

Yucca Mountain 2008 Performance Assessment: Uncertainty and Sensitivity Analysis for Physical Processes, C. J. Sallaberry, A. Aragon, A. Bier, Y. Chen, J. W. Groves, C. W. Hansen, J. C. Helton, S. Mehta, S. P. Miller, J. Min, P. Vo (*SNL*)

## 10:30 a.m.

Yucca Mountain 2008 Performance Assessment: Uncertainty and Sensitivity Analysis for Expected Dose, C. W. Hansen (*SNL*), K. Brooks (*Sala & Assoc*), J. W. Groves (*Intera*), J. C. Helton (*SNL*), K. P. Lee (*Areva Federal Services*), C. J. Sallaberry (*SNL*), W. Statham (*Areva Federal Services*), C. Thom (*Beckman and Assoc*)

## 11:00 a.m.

Yucca Mountain 2008 Performance Assessment: Summary, Peter N. Swift, Kathryn Knowles, Jerry McNeish, Clifford W. Hansen (*SNL*), Robert L. Howard (*UNLV*), Robert Mackinnon, S. David Sevougian (*SNL*)

*\*Please note: This session begins at 8:00 a.m.*

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## Institutional Issues.

### Capri 105

*Session Organizers:* Daniel Bullen (*Exponent*), Barry Butterfield (*HDR*);  
*Session Chairs:* Daniel Bullen (*Exponent*), Leif Erikson (*Consultant*)

## 8:30 a.m.

Does Nuclear Waste Stigmatise a Municipality Selected for Final Disposal?—Experiences and Results Six Years After Site selection in Finland, Timo Seppälä (*Posiva Oy*)

## 9:00 a.m.

Proposal for an International Reversibility-Retrieval Scale, Jean-Noël Dumont, Marie-Claude Dupuis, Jean-Michel Hoorelbeke, Thibaud Labalette, Gerald Ouzounian (*Andra*)

## 9:30 a.m.

Trust, Distrust, and LLW Management in Three Ontario Communities, Ellen Meadd (*York Univ*)

## 10:00 a.m.

NWMO as Implementer: Early Steps in Moving Forward Together, Jo-Ann Facella (*NWMO*)

## 10:30 a.m.

A Nuclear Renaissance Without Disposal?, Charles McCombie, Neil Chapman (*Arius Assoc*)

## 11:00 a.m.

Addressing Public Confidence in the Case for Yucca Mountain Safety, Abraham E. van Luik (*DOE*), David Dobson, Peter N. Swift (*SNL*), Mark C. Tynan (*DOE*)

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## International Perspectives on Engineered Barriers.

### Capri 106

*Session Organizers:* Brady Hanson (*PNL*), George Danko (*Univ of Nevada, Reno*);  
*Session Chairs:* Vincenzo Rondinella (*European Commission*), Sitakana Mohanty (*CNWRA*)

## 8:30 a.m.

Development of Engineering Technology for Sedimentary Rock in “Horonobe URL Project”, Japan, Koichiro Hatanaka (*JAEA*), Hiroshi Morioka (*Tokyo Electric Power Services Co*), Tatsuo Fukushima (*JAEA*)

## 9:00 a.m.

Evolution of the EBS in the ONDRAF/NIRAS Disposal Concept for HLW and Spent Fuel, Stephen Wickham, Liz Harvey (*Galson Sciences*), Ann Dierckx, Robert Gens, Maarten Van Geet (*ONDRAF/NIRAS*)



# Technical Sessions

## 9:30 a.m.

Design Options for the UK's HLW Geological Disposal Facility, Neil Chapman (*Chapman & Co. Consulting*), Tamara Baldwin (*Galson Sciences*), Fiona Neall (*Neall Consulting*), John Mathieson (*Nuclear Decommissioning Authority*), Matthew White (*Galson Sciences*)

## 10:00 a.m.

Posiva's Spent Fuel Disposal Program—Extension Before Construction, Jussi Palmu, Timo Äikäs (*Posiva Oy*)

## 10:30 a.m.

Quantifying the Performance of Various EBS Emplacement Methods, Hideki Kawamura (*Obayashi Corp*), Ian G. McKinley (*McKinley Consulting*), Satohito Toguri Hidekazu Asano (*RWMC*)

## 11:00 a.m.

THEREDA—Thermodynamic Reference Database for Nuclear Waste Disposal in Germany, Sven Gester (*Forschungszentrum Dresden-Rossendorf*), Marcus Altmaier (*Forschungszentrum Karlsruhe*), Vinzenz Brendler (*Forschungszentrum Dresden-Rossendorf*), Sven Hagemann, Horst-Jürgen Herbert (*Gesellschaft für Anlagen- und Reaktorsicherheit mbH*), Christian Marquardt (*Forschungszentrum Karlsruhe*), Helge C. Moog (*Gesellschaft für Anlagen- und Reaktorsicherheit mbH*), Volker Neck (*Forschungszentrum Karlsruhe*), Anke Richter (*Forschungszentrum Dresden-Rossendorf*), Wolfgang Voigt (*TU Bergakademie Freiberg*), Stefan Wilhelm (*AF-Colenco Ltd*)

## TUESDAY, SEPTEMBER 9, 2008 • 1:00 P.M.

### Yucca Mountain Flow and Transport Modeling.

#### Capri 102

*Session Organizers:* Clifford Ho (*SNL*), Al Eddebbarh (*LANL*);

*Session Chairs:* Bill Arnold (*SNL*), Abe van Luik (*DOE*)

#### 1:00 p.m.

Infiltration History at Fortymile Wash, Arturo Woocay, John C. Walton (*Univ of Texas, El Paso*)

#### 1:30 p.m.

Predictive Uncertainty Analysis for a Saturated Zone Flow Model, Al-Aziz Eddebbarh (*LANL*), Scott C. James (*SNL*), John E. Doherty (*Watermark Numerical Computing*)

#### 2:00 p.m.

An Updated Site Scale Saturated Zone Ground Water Transport Model for Yucca Mountain, Sharad Kelkar, Mei Ding, Shaoping Chu, Bruce Robinson (*LANL*), Bill Arnold (*SNL*), Arend Meijer (*GCC*)

#### 2:30 p.m.

Sensitivity Analyses of Radionuclide Transport in the Saturated Zone at Yucca Mountain, Nevada, Bill W. Arnold, Teklu Hadgu, Cedric J. M. Sallaberry (*SNL*)

#### 3:00 p.m.

Sensitivity Analysis of Unsaturated Flow Uncertainty at Yucca Mountain, Feng Pan (*Desert Research Inst/Univ of Nevada, Las Vegas*), Jianting Zhu (*Desert Research Inst*), Ming Ye (*Florida State Univ*), Yu-Shu Wu (*LBNL*), Zhongbo Yu (*UNLV*)

### Waste Form Behavior—II.

#### Capri 103

*Session Organizers:* Brady Hanson (*PNL*), George Danko (*Univ of Nevada, Reno*);  
*Session Chairs:* Brady Hanson (*PNNL*), Aurora Martinez-Esparza (*ENRESA*)

#### 1:00 p.m.

Contribution to Leaching Studies of High-Burnup Spent Nuclear Fuel, J. De Pablo (*UPCI CTM Centre Tecnológico*), I. Casas, J. Gimenez, (*UPC*), F. Clarens, E. González-Robles (*CTM Centre Tecnológico*), D. Serrano-Purroy, J.-P. Glatz, D. Wegen, B. Christiansen (*European Commission, JRC*), A. Martínez-Esparza (*ENRESA*)

#### 1:30 p.m.

Grain Boundary Inventory and Instant Release Fractions for SBR MOX, V. V. Rondinella, D. Serrano-Purroy, J.-P. Hiernaut, D. Wegen, D. Papaioannou (*European Commission, JRC*), M. Barker (*Nexia Solutions*)

#### 2:00 p.m.

Modelling the H<sub>2</sub> Inhibition Effect on UO<sub>2</sub> Matrix Dissolution, Juan Merino, Lara Duro, Abel Tamayo, Jordi Bruno (*AMPHOS*), Aurora Martinez-Esparza (*ENRESA*)

#### 2:30 p.m.

A Revised EPRI Source-Term Model for the Dissolution of Commercial Spent Nuclear Fuel, Fraser King (*Integrity Corrosion Consulting*), Miroslav Kolar (*LS Computing*), Randy Arthur, Mick Apted (*Monitor Scientific*)

#### 3:00 p.m.

Water Availability Inside Proposed Yucca Mountain Repository Breached Waste Packages, Yifeng Wang, Carlos F. Jove-Colon (*SNL*), Michael E. Lord (*Intera*), Patrick D. Mattie, Robert J. Mackinnon (*SNL*)

### Uncertainty and Sensitivity Analyses.

#### Capri 104

*Session Organizers:* Daniel Bullen (*Exponent*), Abe van Luik (*DOE*),

*Session Chairs:* Daniel Bullen (*Exponent*), Kaname Miyahara (*JAEA*)

#### 1:00 p.m.

Use of Robust Sensitivity Indices to Analyze the Structure of Stochastic Performance Assessment Models, Osvaldo Pensado (*CNWRA*)

#### 1:30 p.m.

Numerical Illustration: Effects of Uncertainty and Bias on Risk Predictions, Robert W. Rice (*SRT, Inc.*), John C. Walton (*Univ of Texas, El Paso*)

#### 2:00 p.m.

“What-if?” Calculations to Illustrate Fault-Movement Effects on a HLW Repository, K Miyahara, M. Inagaki, M. Kawamura (*JAEA*), T. Ebina (*NEST*)

#### 2:30 p.m.

Uncertainty Analysis of Radionuclide Release Rate from a Geologic Repository, Daisuke Kawasaki, Shinya Nagasaki, Satoru Tanaka (*The Univ of Tokyo*)

#### 3:00 p.m.

Total System Model Support for the Yucca Mountain Project, Dong Kim (*DOE*), Scott G. Gillespie (*Bechtel SAIC*), Stephen L. Turner (*TerranearPMC*)

#### 3:30 p.m.

Repository Conditions and Environmental Impacts Reduction by Recycling, Joonghong Ahn (*Univ of California, Berkeley*)

### International Regulatory Issues.

#### Capri 105

*Session Organizers:* Ray Clark (*EPA*), Barry Butterfield (*HDR*), Mark Kolbe (*DOE*);

*Session Chairs:* Ray Clark (*EPA*), John Rowat (*IAEA*)

#### 1:00 p.m.

Security Concerns at the Back End of the Nuclear Fuel Cycle, Charles McCombie, Neil Chapman (*Arius Assoc*), Tom Isaacs (*Stanford Univ/LLNL*)

#### 1:30 p.m.

Ukrainian General Provisions on Safe Disposal of Radioactive Waste in Geological Repositories, E. Sobotovich, B. Zlobenko, L. Spasova (*IEG*), A. Pavlenko, Z. Alexeeva, (*State Scientific and Tech Centre for Nuclear and Radiation Safety*)

#### 2:00 p.m.

Amendments to 40 CFR Part 197: The U.S. Environmental Protection Agency's Standards for Yucca Mountain, Nevada, Ray Clark (*EPA*)

# Technical Sessions

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## 2:30 p.m.

Development of the Requirement Management System for Japanese HLW Program, Satoru Suzuki, Hiroyoshi Ueda, Yasushi Sakabe, Katsuhiko Ishiguro, Kazumi Kitayama (*NUMO*), Kiyoshi Oyamada (*JGC Corp*), Shoko Yashio (*Obayashi Corp*)

## 3:00 p.m.

A Scaled-Back QA Program Suitable for Basic Research, Amy J. Smiecinski, Raymond E. Keeler, Julie A. Bertoia, Terry L. Mueller (*UNLV*)

## 3:30 p.m.

Overview of the IAEA's New Safety Guide for Geological Disposal, John Rowat (*IAEA*), Timothy McCartin (*NRC*), Philip Metcalf (*IAEA*)

## 4:00 p.m.

Towards a Globally Harmonized Approach to Demonstrating the Safety of Geological Disposal, Phil Metcalf, Didier Louvat (*IAEA*), Gerard Bruno (*European Commission*), Francois Besnus (*IRSN*)

## WEDNESDAY, SEPTEMBER 10, 2008 • 8:30 A.M.

### Site Characterization and Property Measurements—I.

#### Capri 102

*Session Organizers:* Clifford Ho (*SNL*), Al Eddebarh (*LANL*);

*Session Chairs:* Al Eddebarh (*LANL*), Sharad Kelkar (*LANL*)

## 8:30 a.m.

Jointing Structure Characterization for the Preselected Area of China's Deep Geological Disposal of High-Level Radioactive Waste, Guibin Wang, Chunhe Yang, Liming Yin (*Chinese Academy of Science*)

## 9:00 a.m.

Tectonic Hazard and the Siting of Japan's HLW Repository: Preliminary Results of the Tohoku Case Study in the ITM Project, Hiroyuki Tsuchi, Junichi Goto (*NUMO*), Neil A. Chapman (*MCM*), Hideki Kawamura (*Obayashi Corp*)

## 9:30 a.m.

Hydraulic Head and Salinity Calibration of the Paris Basin Hydrogeological Model Developed by IRSN, Amélie de Hoyos (*IRSN*), Pascal Viennot, Emmanuel Ledoux (*Ecole des Mines de Paris*), Catherine Certes, Muriel Rocher (*IRSN*)

## 10:00 a.m.

Expected Behavior of Basaltic Lava at the Proposed High Level Nuclear Repository at Yucca Mountain, Nevada, Meghan M. Morrissey (*CSM*), Mick Apted (*Monitor Scientific*), John Kessler (*EPRI*)

## 10:30 a.m.

Testing Models for Basaltic Volcanism: Implications for Yucca Mountain, Nevada, Eugene Smith (*UNLV/Geoscience Consultants*), Clinton P. Conrad (*Univ of Hawaii at Manoa*), Terry Plank (*Columbia Univ*), Ashley Tibbetts (*UNLV/Geoscience Consultants*), Deborah Keenan (*Geoscience Consultants*)

## 11:00 a.m.

Conceptual Groundwater Flow Modeling from Non-Disturbing Drilling in Sedimentary Rocks, Kazumasa Ito, Yohey Suzuki, Takeshi Suko, Naoto Takeno (*National Inst of Advanced Industrial Science & Technology*)

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### In-Drift Thermal-Hydrologic Environment.

#### Capri 103

*Session Organizers:* Brady Hanson (*PNL*), George Danko (*Univ of Nevada, Reno*);

*Session Chairs:* George Danko (*Univ of Nevada, Reno*), Clifford Ho (*SNL*)

## 8:30 a.m.

Dual-Permeability Modeling and Evaluation of Drift-Shadow Experiments, Clifford K. Ho, Bill W. Arnold, Susan J. Altman (*SNL*)

## 9:00 a.m.

Comparison of Axial Convection and Equivalent Dispersion Models in Emplacement Drifts, G. Danko, D. Bahrami (*Univ of Nevada, Reno*), J. T. Birkholzer (*LBNL*)

## 9:30 a.m.

The Buffer in the SR-Can Safety Assessment—Some Important Issues, Patrik Sellin (*SKB*)

## 10:00 a.m.

Axial Temperature Variation Due To Radiation Exchange Between Concentric Cylinders, Tim de Bues (*Bechtel SAIC*), Bruce Kirstein (*Nuclear Waste Tech Review Board*)

## 10:30 a.m.

Due Diligence—Sealing a Fracture Zone in Underground Workings, J. B. Martino, D. A. Dixon, D. P. Onagi (*AECL*)

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### Facilities, Transportation, and Fuel Issues.

#### Capri 104

*Session Organizers:* Barry Butterfield (*HDR*), Mark Kolbe (*DOE*),

*Session Chairs:* Budhi Sagar (*CNWRA*), Eileen Supko (*Energy Resources Int*)

## 8:30 a.m.

A Study on Durability of Reinforced Concrete Structure for Spent Fuel Storage Facility, Yoon Hee Lee, Chang Min Lee, Kun Jai Lee (*KAIST*)

## 9:00 a.m.

Fluidized Bed Steam Reforming Enabling Organic High Level Waste Disposal, Michael R. Williams (*SRNL*)

## 9:30 a.m.

A Low-pH Cement-Based Combined Spent-Nuclear-Fuel Storage and Repository Facility, Charles W. Forsberg (*ORNL/MIT*), Les Dole (*ORNL*)

## 10:00 a.m.

Assessment of Spent Nuclear Fuel Transport Accident Risk Using RADTRAN 5.5, Eileen M. Supko (*Energy Resources Int*), John H. Kessler (*EPRI*)

## 10:30 a.m.

Determination of the Depletion Bias Using SAS2H for the K24 Burnup Credit Cask, Charles T. Rombough (*CTR Tech Svc*), Dale B. Lancaster (*NuclearConsultants.com*), Suk-Hoon Kim, Gang-Uk Lee, Jea-Ho Park (*KONES*)

## 11:00 a.m.

Preliminary Assessment of Burnup Credit for Dual-Purpose Cask for SNF, Dohyung Kim, Unjang Lee, Jaehoon Ko, Kyusup Choi (*Korea Nuclear Energy and Service Corp*)

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### Chemical Processes for Managing Wastes.

#### Capri 105

*Session Organizers:* Barry Butterfield (*HDR*), Mark Kolbe (*DOE*);

*Session Chairs:* Rod F. Gimpel (*URS*), Willie Carl Meyer (*NECSA*)

## 8:30 a.m.

Determining Aluminum Compounds and Amounts in Hanford Tank Waste, Rod F. Gimpel (*Washington Group Int*), Daniel A. Reynolds (*AEM Consulting*)

## 9:00 a.m.

A pH Criterion for Controlling Pretreated Hanford Waste Slurry Rheology, Jacob G. Reynolds (*Washington Group Int*), Erich K. Hansen, Russel E. Eibling, T. Bond Calloway, Jr. (*SRNL*)

# Technical Sessions

## 9:30 a.m.

RECOZY: Investigations of Redox Controlling Systems in EU's 7th Framework Programme, Bernhard Kienzler, Gunnar Buckau (*Forschungszentrum Karlsruhe*)

## 10:00 a.m.

Retrievability of Metals in the Borosilicate Glass for Nuclear Wastes, Youichi Enokida, Kayo Sawada, Kazuyoshi Uruga (*Nagoya Univ*)

## 10:30 a.m.

Alternative Use of Irradiated Graphite Waste, WCMH Meyer, A. Goede, IJ van der Walt (*NECSA*)

## WEDNESDAY, SEPTEMBER 10, 2008 • 1:00 P.M.

### Site Characterization and Property Measurements—II.

#### Capri 102

*Session Organizers:* Clifford Ho (*SNL*), Al Eddebbarh (*LANL*);

*Session Chairs:* Sumit Mukhopadhyay (*LBNL*), Jude McMurry (*CNWRRA*)

## 1:00 p.m.

Effective Kd Values for Radionuclides in Yucca Mountain Saturated Alluvium, Cynthia A. Dean, Paul W. Reimus (*LANL*)

## 1:30 p.m.

Biogeochemical and Microbiological Site-Characterization of the Deep Geological Environment, Yohey Suzuki, Takeshi Suko, Naoto Takeno, Kazumasa Ito (*National Inst of Advanced Industrial Science & Technology*)

## 2:00 p.m.

Millimeter-Scale Geologic Mapping Using Field Spectroscopy Techniques, David C. Buesch (*USGS*), Daniel E. Ragona (*BP*), Mark C. Helmlinger (*Northrop Grumman Space Technol*)

## 2:30 p.m.

Modeling of Transport Rates Through Unsaturated Soil at Peña Blanca, Katrina Pekar, John Walton, Philip Goodell (*Univ of Texas, El Paso*)

## 3:00 p.m.

Isotope and Chemical Monitoring of Modern Precipitation, Yucca Mountain, Nevada, Richard J. Moscati (*USGS*), Kevin M. Scofield (*S.M. Stoller*), Paul M. Fransioli, Timothy M. Moran, Gary W. Jones (*Bechtel SAIC*)

### Engineered Systems Transport Processes.

#### Capri 103

*Session Organizers:* Brady Hanson (*PNL*), George Danko (*Univ of Nevada, Reno*);

*Session Chairs:* John Kessler (*EPRI*), Robert Borrelli (*Univ of Tokyo*)

## 1:00 p.m.

Studies To Quantify Effects of Water Inflow Rate on Backfill Behaviour, D. A. Dixon (*AECL*), P. Keto (*Saario and Riekkola OY*), T. Sandén (*Clay Technology AB*), D. Gunnarsson (*SKB*), J. Hansen (*Posiva OY*), S. Anttila (*Pöyry Infra OY*)

## 1:30 p.m.

Large-Eddy, Post-Closure Natural Convection CFD Model for Yucca Mountain, G. Danko, D. Bahrami (*Univ of Nevada, Reno*)

## 2:00 p.m.

Limitations and Patterns of Radionuclide Release from Partially Failed Containers, Lubna Hamdan, John Walton, Arturo Woocay (*Univ of Texas, El Paso*)

## 2:30 p.m.

Development of Compartment Models for Radionuclide Transport in Repository Region, Haruko Murakami, Joonhong Ahn (*Univ of California, Berkeley*)

## 3:00 p.m.

Cation Exchange and Radionuclide Migration in the Engineered Barrier System, R. A. Borrelli, S. Nagasaki, S. Tanaka (*Univ of Tokyo*)

### Challenges in Stakeholder Communication—Panel.

#### Capri 104

*Session Organizer:* Tanya Montgomery (*DOE*);

*Session Chairs:* Allen Benson (*DOE*), Abe van Luik (*DOE*)

Managing high-level radioactive waste is a significant technical challenge made more complex by the political environment that surrounds it. Communicating high-level radioactive waste management issues clearly, completely, and factually within this political environment presents additional challenges. Learn more about the skills, messages, and strategies needed to improve your communication efforts in this interactive panel discussion with experienced members of local media, oversight organizations, and international high-level radioactive waste management organizations and participants.

#### PANELISTS:

- Irene Navis (*Clark County Department of Comprehensive Planning*)
- Darrell Lacy (*Nye County Nuclear Waste Repository Project Oversight Office*)
- Abe van Luik (*DOE*)
- Mosidi Makgae (*PBMR*)
- Jo-Ann Facella (*NWMO*)
- Stratis Vomvoris (*Nagra*)
- Keith Rogers (*Las Vegas Review-Journal*)
- Claudio Pescatore (*Nuclear Energy Agency*)

### Biosphere Topics.

#### Capri 105

*Session Organizers:* Barry Butterfield (*HDR*), Mark Kolbe (*DOE*);

*Session Chairs:* Graham Smith (*GMS Abingdon*), Mark Kolbe (*DOE*)

## 1:00 p.m.

Ambient Radon-222 Monitoring in Amargosa Valley, Nevada, L. H. Karr, J. J. Tappen, T. Kluesner, D. Shafer, K. J. Gray (*Desert Research Inst*)

## 1:30 p.m.

Glaciation Biosphere Model for a Canadian Used Fuel Repository, P. Lum, F. Garisto (*NWMO*)

## 2:00 p.m.

Uncertainty and Variability in Biosphere Dose Conversion Factors for the Groundwater Release Scenario for Yucca Mountain, Graham Smith (*GMS Abingdon*), Juan Merino (*Amphos XXI*), Matthew W. Kozak (*Monitor Scientific*)

## 2:30 p.m.

A Regulatory Modelling Strategy for Review of Dose Calculations, Shulan Xu, Björn Dverstorp (*Swedish Radiation Protection Authority/Swedish Safety Protection Authority*), Lars Marklund, Anders Wörman (*KTH*)

## 3:00 p.m.

Accumulation in the Overburden of Radionuclides from a Leaking Nuclear Waste Repository, Lars Marklund (*KTH*), Shulan Xu (*Swedish Radiation Protection Authority*), Anders Wörman (*KTH*)

# Technical Tour Information

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## 2008 IHLRWM Conference: Yucca Mountain Tour/Nevada Test Site Thursday, September 11, 2008

Completed technical tour registration form must be returned by July 31, 2008

**ALL TOUR PARTICIPANTS MUST BE PRE-REGISTERED.  
NAMES WILL BE CHECKED AT THE BOARDING OF THE BUS.**

- *The Cost of this Tour is not included in the conference fee.*
- *Busses depart from and return to the Riviera Hotel and Casino.*
- *Limited spaces will be filled on a first come, first serve basis.*

**PLEASE NOTE:**

*There are no guaranteed clearances for Foreign National guests.*

**ON THE DAY OF THE TOUR:**

Since you will be entering a construction area, be sure to wear long pants, a shirt with sleeves (no tank tops), and sturdy, comfortable, closed-toe/heel shoes or boots (no sandals or high heels). Other parts of the tour will require walking on unpaved surfaces and desert terrain. You may want to bring a hat and sunglasses for sun protection. As the group leaves the mountain, we hope each member is better enlightened about one of the most important issues facing our nation in the 21st century.

**PLEASE NOTE:**

**A box lunch will be provided as part of the tour fee.**

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### **NATIONAL NUCLEAR SECURITY ADMINISTRATION: NEVADA SITE OFFICE**

#### **PROHIBITED ARTICLES ON NEVADA TEST SITE PUBLIC TOURS**

The following items are prohibited on the Nevada Test Site public tours. If you have any of these items on your person, please return them to your vehicle. Tour escorts are required to do random checks.

- Cameras
- Cellular phones
- Weapons
- Explosives
- Any Item Prohibited by Law
- Controlled Substances
- Ammunition
- Incendiary Devices
- Binoculars
- Optical Devices
- Transmitting & Receiving Devices (PDA, BlackBerry, etc.)
- Laptops & Associated Media
- Alcohol
- Chemical Irritants
- Pets & Animals
- Global Positioning System (GPS)
- Recorders
- Portable Data Storage Devices

**POSSESSION OF THESE ITEMS MAY DELAY THE DEPARTURE OF THE TOUR AS WELL AS PREVENT YOUR PARTICIPATION.**

**IF AT ANY POINT DURING THE TOUR THESE ITEMS ARE DISCOVERED, THE TOUR MAY BE TERMINATED AND SENT BACK TO LAS VEGAS.**

**Mark Your Calendars!**

# **American Nuclear Society: 2008 WINTER MEETING**

**“Nuclear Power—Ready, Steady, Go”**



**November 9-13, 2008  
Reno, Nevada  
Grand Sierra Hotel**

**CONFERENCE CHAIRS:**

**General Chair:**

David J. Hill, *Idaho National Laboratory*

**Technical Program Chair:**

Robert B. Hayes, *National Security Technologies*

**Assistant Technical Program Chairs:**

Bojan Petrovic, *Georgia Institute of Technology* • David Anderson, *Electric Boat Corporation*

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**Preliminary Program now online:**

**[www.ans.org](http://www.ans.org)**

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*Visit the ANS home page [www.ans.org](http://www.ans.org)  
for future meetings and more!*





**American Nuclear Society** *meetings and conferences*  
are the best way to keep current with the ever changing  
fields of nuclear science and technology.

### 3 WAYS TO KEEP UP-TO-DATE

- 1) The national meetings feature comprehensive technical programs, professional development workshops, exhibits, tours and special events
- 2) Executive conferences and workshops focus on timely issues and topics regarding the implementation, operation and regulation of the nuclear industry
- 3) Topical meetings provide in-depth coverage of selected technical subjects



2009 ANS Annual Meeting • Atlanta, Georgia



2009 ANS Winter Meeting • Washington, D.C.

*The opportunity to meet other professionals and discuss issues with recognized authorities will enrich your professional development.*

**Make plans now to attend!**

## 2009 NATIONAL MEETINGS

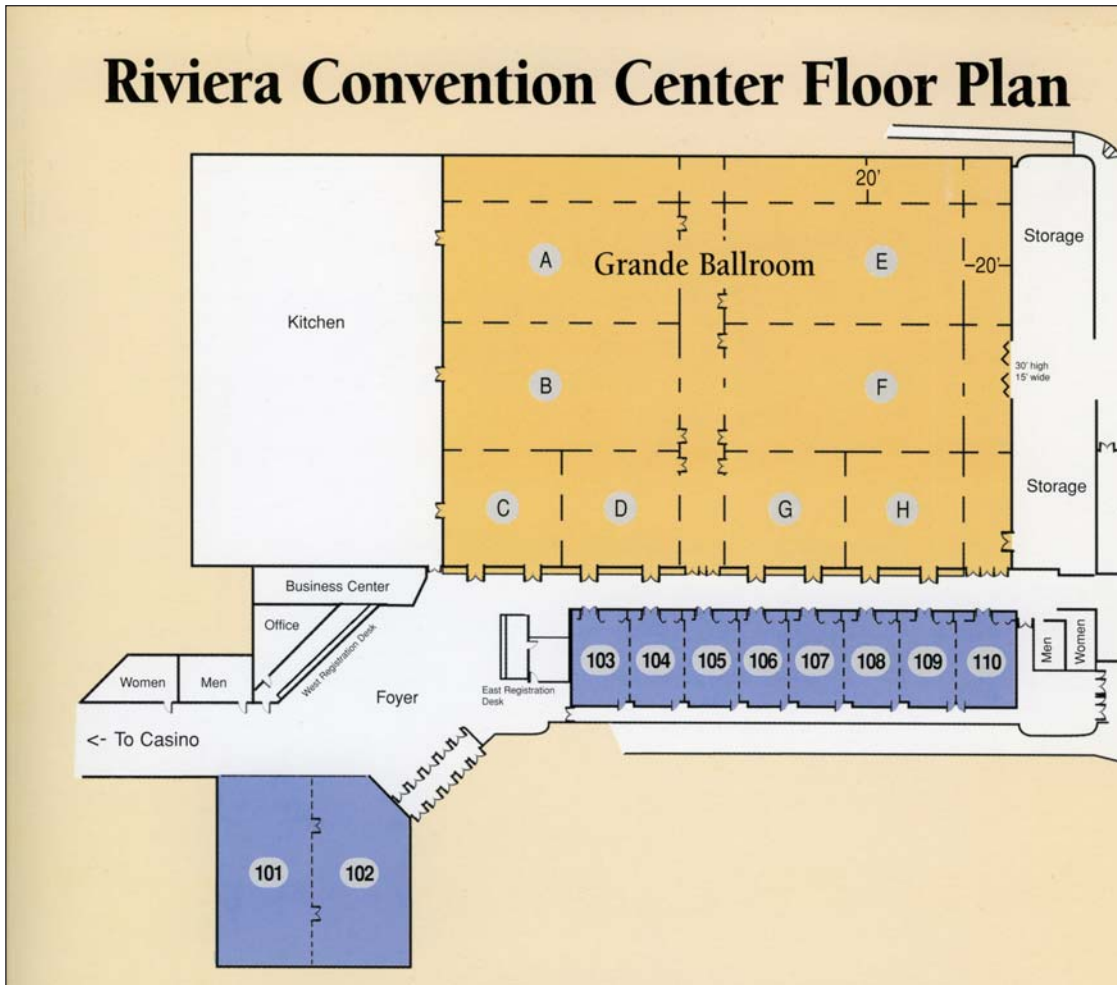
DATE	TITLE	LOCATION
Jun 14-18, 2009	<b>2009 ANS ANNUAL MEETING</b> <i>"Advancing Nuclear Technology for a Greater Tomorrow"</i> and EMBEDDED TOPICAL MEETING <b>NUCLEAR AND EMERGING TECHNOLOGIES FOR SPACE</b> (NETS—2009; Formerly Space Nuclear Conference)	<b>Atlanta, Georgia</b> Hyatt Regency Atlanta Hotel
Nov 15-19, 2009	<b>2009 ANS WINTER MEETING AND NUCLEAR TECHNOLOGY EXPO</b> and EMBEDDED TOPICAL MEETING <b>RISK MANAGEMENT</b> and EMBEDDED TOPICAL MEETING <b>2009 YOUNG PROFESSIONALS CONGRESS</b>	<b>Washington, D.C.</b> Omni Shoreham Hotel

## 2009 TOPICAL AND OTHER IMPORTANT MEETINGS

DATE	TITLE	LOCATION
Feb 8-11, 2009	<b>CONFERENCE ON NUCLEAR TRAINING AND EDUCATION (CONTE'09)</b> <b>AND VENDOR TECHNOLOGY EXPO</b>	<b>Jacksonville, Florida</b> Hyatt Regency Riverfront
Apr 5-9, 2009	<b>6<sup>TH</sup> INTERNATIONAL TOPICAL MEETING ON NUCLEAR PLANT INSTRUMENTATION CONTROL AND HUMAN MACHINE INTERFACE TECHNOLOGY</b> (NPIC&HMIT2009)	<b>Knoxville, Tennessee</b> Knoxville Marriott
Apr 6-10, 2009	<b>8<sup>TH</sup> INTERNATIONAL CONFERENCE ON METHODS AND APPLICATIONS OF RADIOANALYTICAL CHEMISTRY</b> (MARC VIII)	<b>Kailua-Kona, Hawaii</b> King Kamehameha's Kona Beach Hotel
Apr 12-15, 2009	<b>ADVANCES IN NUCLEAR FUEL MANAGEMENT IV</b>	<b>Hilton Head, South Carolina</b> Hilton Oceanfront Resort
May 3-7, 2009	<b>2009 INTERNATIONAL CONFERENCE ON MATHEMATICS, COMPUTATIONAL METHODS, AND REACTOR PHYSICS</b>	<b>Saratoga Springs, New York</b> Knolls Atomic Power Laboratory
Aug 2-5, 2009	<b>UTILITY WORKING CONFERENCE AND VENDOR TECHNOLOGY EXPO</b>	<b>Amelia Island, Florida</b> Amelia Island Plantation
Aug 23-27, 2009	<b>14<sup>TH</sup> INTERNATIONAL CONFERENCE ON ENVIRONMENTAL DEGRADATION OF MATERIALS IN NUCLEAR POWER SYSTEMS</b>	<b>Virginia Beach, Virginia</b> Hilton Virginia Beach
Sep 13-17, 2009	<b>NUCLEAR CRITICALITY SAFETY: REALISM, ROBUSTNESS AND THE NUCLEAR RENAISSANCE</b>	<b>Richland, Washington</b>



# Riviera Convention Center Floor Plan



**PLEASE NOTE:**  
The Capri rooms are numbered 101 through 110.