



# NRC NEWS

**U.S. NUCLEAR REGULATORY COMMISSION**

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## **29<sup>th</sup> ANNUAL NUCLEAR SAFETY RESEARCH CONFERENCE TO BE HELD OCTOBER 22 - 24 IN WASHINGTON, D.C.**

The Nuclear Regulatory Commission will hold its 29<sup>th</sup> Nuclear Safety Research Conference on October 22-24 at the Marriott Metro Center in Washington, D.C.

The conference, formerly known as the "Water Reactor Safety Information Meeting," will feature presentations and discussions on a number of technical and communications topics. The name change more accurately reflects the wide range of issues that will be covered. The conference, which is open to the public, will run from 8:00 a.m. to 5:00 p.m. on Monday, from 8:15 a.m. to 6 p.m. on Tuesday, and from 8:00 a.m. to 4:00 p.m. on Wednesday. The Marriott Metro Center is located at 775 Twelfth Street, N.W., Washington, D.C., adjacent to the Metro Center subway station.

NRC Chairman Richard A. Meserve will deliver the keynote address Monday morning. Commissioner Greta Dicus will be a plenary speaker, while Commissioners Edward McGaffigan, Jr. and Jeffrey Merrifield will moderate sessions on waste and decommissioning and advanced reactors, respectively. Commissioner Nils Diaz also will provide brief remarks.

In addition to an overview of international and U.S. research programs, this year's agenda will include technical sessions on research in advanced reactors, storage of spent nuclear fuel in dry casks, nuclear fuel behavior, nuclear waste and reactor decommissioning issues. The conference also will explore nuclear power plant age-related issues and risk-informed regulation and will include a panel on how the agency can more effectively communicate with members of the public. A complete agenda is attached.

Those who wish to attend the conference are encouraged to register in advance at [www.bnl.gov/NSRC](http://www.bnl.gov/NSRC), or by contacting Sandra Nesmith at [www.srn@nrc.gov](mailto:srn@nrc.gov)

Nuclear Safety Research Conference (NSRC)  
*(formerly known as the Water Reactor Safety Meeting (WRSM))*  
October 22-24, 2001  
Marriott at Metro Center  
(775 12<sup>th</sup> St. NW, Washington DC)

**Monday, October 22, 2001**

8:00-8:15am **Opening Remarks - Ashok Thadani, Director, Office of Nuclear Regulatory Research**

8:15-9:00am **Keynote Speaker - Richard Meserve, Chairman, NRC**

9:00-9:30am **Recent Accomplishments - Roy Zimmerman, Deputy Director, Office of Nuclear Regulatory Research**

9:45-11:30am **Overview of International/U.S. Research Programs - Panel Discussion  
Moderator: A. Thadani)**

Objective: The panel will provide an overview of other safety research programs in the U.S. and overseas.

Panel Members Include: M. Livolant (IPSN), W. Magwood (DOE), T. Marston (EPRI), and K. Soda (JAERI)

11:30-12:15pm **Plenary - Commissioner Greta J. Dicus**

12:15-1:45pm **LUNCH**

<p>1:45-5:00pm</p>	<p><b><u>Advanced Reactors Session</u></b>  <b>Chair: T. King, NRC</b>  <b>Co-Chair: S. Floyd, NEI</b></p> <p><u>Objective:</u> To communicate specific research activities related to preparing the Agency to review an advanced design.</p> <p><u>Presentations</u></p> <ol style="list-style-type: none"> <li>1. NRC Pre-application Activities on HTGR, J. Flack (NRC)</li> <li>2. NRC Preparation for Future Reactor Licensing, J. Lyons (NRC)</li> <li>3. A New Risk-Informed Design and Regulatory Process , M. Golay (MIT)</li> <li>4. The Need for a New Regulatory Framework, S. Floyd (NEI)</li> <li>5. HTGR Research Programs and Needs, T. King (NRC)</li> <li>6. Industry View on R&amp;D Needs for New Plants, E. Rodwell (EPRI)</li> <li>7. Pre-application Activities for IRIS and Related Research Needs, M. Carelli, S, Ritterbusch (Westinghouse)</li> </ol>	<p><b><u>Dry Cask Research Session</u></b>  <b>Chair: M. Cunningham, NRC</b>  <b>Co-Chair: J. Guttman, NRC</b></p> <p><u>Objective:</u> To communicate recent accomplishments and future plans in the Office of Research's work to assess key safety and risk issues relating to the licensing of dry cask fuel storage devices.</p> <p><u>Presentations</u></p> <ol style="list-style-type: none"> <li>1. The Package Performance Study - A Study of Spent Fuel Transportation, A. Murphy, R. Lewis (NRC), J. Sprung, K. Sorenson (SNL)</li> <li>2. A Risk Analysis of Spent Nuclear Fuel in Dry Casks, C. Ryder, E. Rodrick, J. Guttman (NRC)</li> <li>3. Seismic Behavior of Spent Fuel Storage Cask Systems, S. Khalid Shauket (NRC)</li> <li>4. An Analysis of a Spent Fuel Transportation Cask Under Rail Tunnel Fire Conditions , C. Bajwa (NRC)</li> </ol>
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**Tuesday, October 23, 2001**

<p>8:15-10:30am</p>	<p><b><u>Waste and Decommissioning - Panel Discussion</u></b>  <b>Moderator: Commissioner Edward McGaffigan, Jr., Commissioner, NRC)</b></p> <p><u>Objective:</u> The panel will discuss current research initiatives in addressing issues in human and environmental health risk assessment.</p> <p><u>Panel Members Include:</u> A. Wallo (DOE), M. Boyd (EPA), T. Cardwell (CRCPD), C. Paperiello (NRC), and L. Baekelandt (Federal Agency for Nuclear Control in Belgium)</p>
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<p>10:45-12:45pm</p>	<p><b><u>Advanced Reactors - Panel Discussion</u></b>  <b>Moderator: Jeffrey S. Merrifield, Commissioner, NRC</b></p> <p><u>Objective:</u> The panel will give an overview of ongoing programs and discuss the following: safety attributes of advanced designs, key issues with respect to licensing, key issues with respect to development, research needs/priorities, and the outlook for the future.</p> <p><u>Panel Members Include:</u> R. Simard (NEI), T. Marston (EPRI), W. Magwood (DOE), V. Asmolov (KI), E. Lyman (NCI), P. Lyons (U.S. Senate Staff (Senator Pete Domenici))</p>
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<p>12:45-2:15pm</p>	<p><b>LUNCH</b></p>
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2:15-6:00pm

**Fuel Research Session**

**Chair: R. Meyer, NRC**

**Co-Chair: R. Yang, EPRI**

Objective: To communicate recent accomplishments in NRC's fuel research program and related programs that are used by NRC through cooperative agreements.

**Presentations**

1. Study of High Burnup Fuel Behavior Under LOCA Conditions at JAERI - Hydrogen Effects on the Failure-bearing Capability of Cladding Tubes, F. Nagase, H. Uetsuka (JAERI)
2. Overview of Test Results on Mechanical Properties of Unirradiated and Irradiated Zr-1%Nb E110 Alloy Cladding, L. Yegorova, E. Kaplar, K. Lioutov (RRC), V. Smirnov, A. Goryachev (Russian State Research Center)
3. High Temperature Oxidation of Irradiated Limerick BWR Cladding, Y. Yan, R. Strain, M. Billone (ANL)
4. Status of the CABRI International Programme and Preparation for the CIP0 Test Series, J. Papin, C. Marguie, F. Lemoine, M. Faury, J. C. Melis (IPSN)
5. FRAPTRAN Fuel Rod Code and its Coupled Transient Analysis with the GENFLO Thermal Hydraulic Code, K. Valtonen (STUK), A. Hamalainen (VTT), M. Cunningham (PNNL)

**Age Related Issues and Research Session**

**Chair: N. Chokshi, NRC**

**Co-Chair: W. Bateman, NRC**

Objective: To provide information on NRC's current research activities related to aging and age related degradations, and how these activities relate to some of the current operating experiences and other emerging issues. In part, this session will also provide information on aging management activities in other industries.

**Presentations**

1. Stress Corrosion Cracking and non-Destructive Examination of Dissimilar Metal Welds and Alloy 600, D. Jackson
2. Regulatory Activities Related to Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles, A. Hiser (NRC)
3. Aging Evaluation of Cables in Japan, A. Yamaguchi (Japan Power Engineering Corporation)
4. FAA Enhanced Airworthiness Program for Managing Aging in Airplane Systems, M. Sadeghi (FAA)
5. Methods to Integrate Aging Effects into Probabilistic Risk Assessments, A. Buslik (NRC)
6. Age-Related Degradation of Structures and Passive Components at Nuclear Power Plants, J. Braverman (BNL), B. Ellingwood (Georgia Inst. of Tech.), D. Naus (ORNL), T.Y. Chang (NRC)

**Wednesday, October 24, 2001**

<p>8:00-10:30am</p>	<p><b>Communicating the RES Role and Program - Panel Discussion</b>  <b>Moderator: Patricia Norry, Deputy Executive Director for Management Services, NRC</b></p> <p><u>Objective:</u> The panel will explore and seek innovative ways to communicate the role and the scope and content of the RES program, with particular emphasis on objectives, products, and regulatory applications.</p> <p><u>Panel Members Include:</u> D. Cates (Committee on Energy and Commerce, U.S. House of Representatives), M. Conley (Inside N.R.C.), A. Howard (NEI), A. Kadak (MIT), D. Lochbaum (Union of Concerned Scientists), T. Okkonen (STUK), and Margaret Federline (NRC)</p>	
<p>10:45am-12noon</p>	<p><b>Fuel Research Session (Cont'd)</b></p> <p><u>Presentations</u></p> <p>6. Pulse Width Variations in a Rod Ejection Accident, D. Diamond (BNL)</p> <p>7. The Industry-Proposed New RIA Criteria for Burnup Extension, N. Waeckel (Electricite de France), R. Montgomery (Anatech Corporation), R. Yang (EPRI)</p> <p>Poster Paper: Needs for Experimental Programmes on LOCA Issues Using High Burnup and MOX Fuels, A. Mailliat, M. Schwarz (IPSN)</p>	<p><b>Risk Informing Regulatory Practices Session</b>  <b>Chair: M. Cunningham, NRC</b>  <b>Co-Chair: C. Carpenter, NRC</b></p> <p><u>Objective:</u> To communicate recent accomplishments and future plans in the Office's work to risk-inform agency regulatory practices, showing the breadth and value of such activities as well as describe key technical issues.</p> <p><u>Presentations</u></p> <p>1. An Overview of NRC Research Activities in PRA, S. Newberry, P. Baranowsky, M. Cunningham (NRC)</p> <p>2. Pressurized Thermal Shock Risk Assessment, D. Whitehead, V. Dandini (SNL), A. Kolaczowski (Science Applications International Corp.), E. Thornsby, H. Woods (NRC)</p>
<p>12noon-1:15pm</p>	<p><b>LUNCH</b></p>	

1:15-3:45pm	<p><b>Fuel Issues - Panel Discussion</b>  <b>Chair: R. Meyer</b></p> <p><u>Objective:</u> What issues should be addressed in an NRC safety research program, and is the current spectrum of research projects adequate?</p> <p><u>Panel Members Include:</u> T. King (NRC), R. Yang (EPRI), R. Reynolds (Framatome), G. Holahan (NRC), W. Shack (ACRS)</p>	<p><b><u>Risk Informing Regulatory Practices Session (Continued)</u></b></p> <p>3. Circuit Analysis in Fire Risk Assessment , S. Nowlen, F. Wyant (SNL), N. Siu, H. Woods (NRC)</p> <p>4. Risk-Based Performance Indicators and the Inspection Process, P. Baranowsky (NRC)</p> <p>5. EPRI Strategic Action Plan for Risk Technology, J. Gaertner, J. Haugh (EPRI)</p>
4:00pm	<p><b>Closing Remarks/Audience Feedback - Ashok Thadani, Director, Office of Nuclear Regulatory Research</b></p>	

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