# The Program for the International Symposium on Seismic Safety of Nuclear Power Plants and Lessons Learned from the Niigataken Chuetsu-oki Earthquake

As of Dec. 26, 2007

#### **Host Organizations:**

Japan Atomic Industrial Forum (JAIF)

Japan Nuclear Technology Institute (JANTI)

Central Research Institute of Electric Power Industry (CRIEPI)

#### In Cooperation with:

American Society of Mechanical Engineers, Architectural Institute of Japan, Atomic Energy Society of Japan, Electric Power Research Institute (US), Japan Association for Earthquake Engineering, Japan Atomic Energy Relations Organization, Japan Electric Association, Japan Society of Civil Engineers, Japan Society of Mechanical Engineers, Japanese Geotechnical Society, Nuclear Energy Institute (US), Nuclear Safety Research Association (Japan)

# Tuesday, February 26, 2008

08:30- Registration

09:15-09:40

< Opening >

## **Opening Address**

Ryoichi Shirato, President, Central Research Institute of Electric Power Industry (CRIEPI), Japan

#### **Welcome Address**

Hiroshi Aida, Kashiwazaki City Mayor Hiroo Shinada, Kariwa Village Mayor

9:40-10:15

## **Keynote Address**

"The earthquake and nuclear power plants" (tentative)

H.E. Tokio Kano, Member of the House of Councilors, Japan

10:15-10:50

#### **Keynote Address**

"The safety operation of nuclear power plants" (tentative)

Lucas Mampaey, Managing Director, World Association of Nuclear Operators (WANO)

#### 10:50-11:30

#### **Special Lecture**

"The impact of the earthquake on the Kashiwazaki-Kariwa NPS and ongoing actions by TEPCO" (tentative)

Ichiro Takekuro, Executive Vice-President and Chief Nuclear Officer, Tokyo Electric Power Company (TEPCO), Japan

11:30-13:00 Lunch Break

13:00-16:20

#### < Session 1 > Integrity Evaluation of Equipment Affected by the Earthquake

This session introduces the integrity evaluation methods applied in Japan and abroad regarding the equipment affected by the Niigataken Chuetsu-oki earthquake. A panel discussion is held regarding the cases of integrity evaluations for the equipment at Kashiwazaki-Kariwa Nuclear Power Station affected by the earthquake.

**Co-Chairperson**: Shojiro Matsuura, Advisor, Nuclear Safety Research Association (NSRA), Ex-Chairman, Nuclear Safety Commission (NSC), Japan

**Co-Chairperson**: Bob Sims, Senior Vice President, ASME Codes and Standards, American Society of Mechanical Engineers (ASME), US

#### **Presentations**

"The evaluation method on seismic strength of structure by ASME"(tentative)

John Stevenson, Member, ASME BPV Subcommittee III, American Society of Mechanical Engineers (ASME), US

"The result of inspection and analysis for major equipment at Kashiwazaki-Kariwa Nuclear Power Station" (tentative)

Kazuhiko Yamashita, General Manager, Niigataken Chuetsu-oki Earthquake Restoration Management Center, Nuclear Asset Management Dept., Tokyo Electric Power Company (TEPCO), Japan

"Interim report of the <u>structural integrity assessment committee</u> for <u>nuclear components</u> damaged by <u>earthquake (SANE)"</u>

Toshiharu Nomoto, Chairman of the SANE, Professor Emeritus, The University of Tokyo

"Evaluation of nuclear equipment & component by EPRI" (tentative)

Greg Hardy, Member of EPRI Seismic Team, Electric Power Research Institute (EPRI), US

#### **Panel Discussion & Chairpersons' Summary**

# Wednesday, February 27, 2008

09:00-11:50

#### < Session 2 > Earthquake Induced Ground Deformation - Its Impact and Safety Significance

This session introduces the latest knowledge and information about countermeasures in Japan and abroad against the earthquake induced ground deformation which caused many damage to the equipment at Kashiwazaki-Kariwa Nuclear Power Station. A panel discussion is held.

**Co-Chairperson**: Takaji Kokusho, Professor, Civil Engineering Dept., Science and Engineering School, Chuo University, Japan

**Co-Chairperson**: Greg Hardy, Member of EPRI Seismic Team, Electric Power Research Institute (EPRI), US

#### **Presentations**

"Seismic performance evaluation of geotechnical works in nuclear power plants in Japan"

Jun'ichi Tohma, Associate Vice President, Director, Civil Engineering Research

Laboratory, Central Research Institute of Electric Power Industry (CRIEPI), Japan

"Enforcement of foundation and countermeasures for liquefaction of ground made by TEPCO" (tentative)

Toshiaki Sakai, General Manager, Civil Engineering Group, Niigataken Chuetsu-oki Earthquake Restoration Management Center, Nuclear Asset Management Dept., Tokyo Electric Power Company (TEPCO), Japan

"The countermeasures for earthquake induced ground deformation at nuclear power plants in the United States" (tentative)

Lloyd S. Cluff, Director, Geoscience Dept., Earthquake Risk Management, Pacific Gas and Electric Company (PG&E), US

"Damage by earthquake Induced ground deformation and external common factors" (tentative)

Ravi Ravindra, Member, ASME/ANS Writing Team for PRA Standard External Events, American Society of Mechanical Engineers (ASME), US

# - Panel Discussion & Chairpersons' Summary

11:50-13:00 Lunch Break

13:00-15:30

#### < Session 3> Emergency Preparedness and Fire Protection

This session examines how nuclear power plants in Japan and abroad cope with natural disaster. A panel discussion is held regarding emergency preparedness and fire protection.

**Co-Chairperson**: Takashi Shoji, Secretary General, World Association of Nuclear Operators (WANO) Tokyo Centre

**Co-Chairperson**: Laurent Stricker, Advisor to the Chairman and CEO Nuclear Issue, Electricite de France (EDF)

#### **Presentations**

"Countermeasures made by TEPCO"

Makoto Ookura, General Manager, Nuclear Security & Industrial Safety Management Group, Nuclear Power Plant Management Dept., Tokyo Electric Power Company (TEPCO), Japan

"The emergency prepared plan of nuclear power plants in the United States" (tentative)

George Felgate, Vice President, Institute of Nuclear Power Operations (INPO), US

"The experience of emergency preparedness at Waterford Nuclear Power Station" (tentative)

James Jack Lewis, Manager, Emergency Planning Department, Entergy Operations, Inc., US

"The measures for emergency preparedness and fire protection at nuclear power plants in France" (tentative)

Laurent Stricker, Advisor to the Chairman and CEO Nuclear Issue, Electricite de France (EDF)

#### Panel Discussion & Chairpersons' Summary

15:40-15:50 Break

15:50-17:20

#### <Concluding Session>

Co-Chairperson: Michio Ishikawa, President, Japan Nuclear Technology Institute (JANTI)

Co-Chairperson: Alex Marion, Executive Director, Nuclear Operations & Engineering, Nuclear Energy Institute (NEI), US

Panelists: Shojiro Matsuura, Advisor, Nuclear Safety Research Association (NSRA), Ex-Chairman, Nuclear Safety Commission (NSC), Japan

Takaji Kokusho, Professor, Civil Engineering Dept., Science and Engineering School, Chuo University, Japan

Laurent Stricker, Advisor to the Chairman and CEO Nuclear Issue, Electricite de France (EDF)

Dave Modeen, Director, External Affairs, Nuclear Power Sector, Electric Power Research Institute (EPRI), US

# Panel Discussion and Questions & Answers Chairpersons' Summary

17:20-17:30

#### **Closing Address**

Takuya Hattori, President, Japan Atomic Industrial Forum (JAIF)

- Press Conference at 11:30 12:15 on Tuesday, February 26
- Press Conference at 17:30 18:15 on Wednesday, February 27