



International Atomic Energy Agency

International Seismic Safety Centre International Workshop on Seismic Safety of Nuclear Installations

17–19 March 2010

Kashiwazaki, Japan

**Organized by the International Atomic Energy Agency,
International Seismic Safety Centre, and
Co-organised by IAEA Asia Nuclear Safety Network**

Hosted by: Nuclear and Industrial Safety Agency (NISA), Japan

INFORMATION SHEET

1. BACKGROUND

Seismic safety of nuclear installations is a subject that has received substantial attention at the IAEA within the framework of its statutory functions for establishing nuclear safety standards and providing for their application. IAEA Safety Standards have been developed since the 1970s and were significantly improved in late 1990s. Today they are widely applied among the Member States. The seismic safety review services based on these standards started in 1980s and to date more than 110 missions by interdisciplinary teams of experts have been conducted in a large number of countries for existing nuclear installations and during the site selection and evaluation phases for new nuclear installations.

In view of the recently recorded earthquake ground motions at nuclear power plant sites in Japan, and other strong earthquakes that have occurred worldwide, the IAEA established the International Seismic Safety Centre (ISSC) in its Secretariat. The ISSC acts as an

international focal point for seismic safety information related to nuclear installations. It is intended that it will provide services to IAEA Member States, including the development of safety standards and supporting publications and the application of safety standards, which are in the basic functions stated in the IAEA Statute. It also carries out topical study projects, provides education, training opportunities and a shared knowledge database. Resources for these activities are based on the Agency's Regular Budget and voluntary contributions by Member States.

After the IAEA's Director-General, Mr Mohammed ElBaradei, announced its establishment in September 2008, the ISSC issued a note verbale informing Member States of the Centre's establishment and calling for cooperation, participation and contributions from Member States. So far, approximately 20 States responded indicating that they were willing to participate or support the ISSC and 5 of them indicated monetary contributions. The ISSC has also been developing and revising safety standards, conducting review missions, developing a knowledge sharing database and an external events notification system, and organizing international experts in topical study working areas. In addition, the ISSC created a Scientific Committee which consists of sixteen international scientists to provide scientifically endorsed guidance to the ISSC's activities, and dispatched a fact-finding mission to the Kashiwazaki-Kariwa NPP, Japan. Currently the ISSC is seeking a way to integrate considerations relating to protecting against external hazards (hydraulic, meteorological, volcanic hazards and human induced events) into one framework to provide services to Member States in a systematically integrated manner.

The aim of this international workshop is to provide information regarding all the above activities, and to share current issues and lessons considered in the ISSC. As a topical group of the IAEA's Asia Nuclear Safety Network (ANSN) has been newly created to cope with nuclear facility siting issues in Asian Member States, the international workshop will jointly be organized by the ANSN.

2. OBJECTIVES

The main objective of this workshop is to share recent technical knowledge and information on research developments, as well as the experience and good practices relating to the occurrences and effects of this type of extreme external event on nuclear power plant sites.

Drawing lessons learned from recent events, the IAEA has been playing, over the past several decades, an active role in providing periodic activities like this international workshop. Through the workshop the IAEA aims to disseminate information to the nuclear energy community with a view to revising and updating the IAEA Safety Standards relevant in the subject of seismic safety. Some of these actions are already under way.

3. SCOPE

The Workshop will cover the following:

1. Seismic hazard assessment, including vibratory ground motion, fault displacement and other associated hazards (including effects such as liquefaction, subsidence, slope

- failures and ground collapse)
2. Response, behaviour and integrity assessment of structures, systems and components (SSCs) (mechanical and electrical)
 3. On-site and off-site operator responses to the occurrence of external hazard events
 4. Seismic interaction of SSCs and related incidents such as fire, internal flood and ageing

4. STRUCTURE

The workshop consists of five sessions on the introduction about the ISSC and in accordance with the scope described above. The sessions will be organized in an open forum style, allowing the participation of a wide audience. The outline of the programme is as follows (subject to speakers' availability). Extensive information about the experience of Japanese institutes regarding Kashiwazaki-Kariwa, Hamaoka and other NPPs will be provided. Each session has a number of presentations and panel discussion.

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Session 1: Introduction of ISSC Activities

1. Establishment and outline of the ISSC
2. Reports of capacity building, education and training activities
3. Development of IAEA Safety Standards (DS383, DS 422, DS417, and DS405)
4. Recent IAEA missions to Member States
5. Current issues in Member States (including ANSN members)
6. Information sharing mechanism on lessons learned from recent events

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Session 2: Seismic Hazard Assessment

7. Alternative ground motion scaling and advanced methods of seismic hazard assessment
8. Base rock characteristics and seismic ground motion
9. Paleo-seismological studies and earth-science issues
10. Earthquake catalogues and seismic safety related database
11. Tsunami and meteorological hazard assessment

Session 3: Response, Behaviour and Integrity Assessment of SSCs

12. Integrity assessment of SSCs

13. Seismic design evaluation methodologies
14. Structural and mechanical behaviour of SSCs through international benchmark programme
15. Seismic isolation

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Session 4: On-site and Off-site Operator Actions

16. Pre-earthquake planning and Post-earthquake actions
17. Seismic instrumentation and reactor shutdown criteria
18. Damage indication parameters

Session 5: Seismic Interaction of SSCs and Related Incidents

19. External Events Notification System
20. Response in case of external hazard events
21. Implementation of “TiPEEZ System”, the information management tool for nuclear emergency response against effects induced by earthquakes or tsunamis
22. External human-induced events in site evaluation

5. PARTICIPATION

The participants should be high level experts from regulatory authorities, utilities, engineering and consultancy organizations, and academic and R&D institutions involved in the topics that the workshop is targeting. Participants should be officially designated by their relevant governmental authority (Ministry of Foreign Affairs or National Atomic Energy Authority) and should send by fax or email, the attached participation form before **29 January 2010** to the Scientific Secretaries of the workshop. All participants should be registered through a designated channel as mentioned above.

6. ORGANIZATION OF THE WORKSHOP

The workshop is organized by the International Atomic Energy Agency and hosted by the Nuclear and Industrial Safety Agency (NISA) of Japan. The working language of the workshop will be English. The organizing institution has nominated the following committees and members:

Scientific Secretaries:

IAEA	NISA
Mr Antonio Godoy email: A.R.Godoy@iaea.org	Mr Kentaro Morita email: morita-kentaro@meti.go.jp
Mr Shin Morita email: S.Morita@iaea.org	Ms Aya Ishimi email: ishimi-aya@meti.go.jp

7. ABSTRACTS AND PAPERS

The workshop is organized through presentations by invited lecturers.

However, participants are invited to present technical contributions on the specific subjects of the workshop and within the scope of the indicated sessions in the programme. The technical contributions will be selected on the basis of abstracts once they have been received. Any individual requiring early confirmation of acceptance of his/her presentation is therefore encouraged to submit his/her abstract as soon as possible. The abstract should be in A4 format, should not exceed 500 words and should be sent electronically to the Scientific Secretary, Mr Shin Morita (Email: S.Morita@iaea.org) not later than **29 January 2010**. Authors will be notified regarding the acceptance of the abstract by **15 February 2010**.

The manuscript of the paper should be typed; single spaced in A4 format or 8.5 by 11 in. paper in Times New Roman 10 or 12 point and should include original illustrations and black and white glossy prints of all photographs. The paper should be not more than 12 pages (including Figures). The author's name(s) should be given on the first page of the paper as follows:

TITLE OF PAPER By Mr John No Name*, George Young**, Willy Spring*** * Position and Address ** Position and Address ***Position and Address
ABSTRACT Based on abstract provided previously, but to include major conclusions.
KEY WORDS Include a list of keywords at bottom of first Page

In addition to the master (paper) copy, an electronic version of the paper is necessary to ensure quality and timely issuance of the proceedings to be prepared and distributed in electronic form (CD-ROM). It is highly desirable to use an internationally used software programme, preferably in MS Word format.

8. DELIVERABLE

A working material document containing all presentations including conclusions and recommendations will be issued and distributed by IAEA, not later than 6 months after the workshop.

9. PRACTICAL INFORMATION

Workshop location:

Kashiwazaki Chamber of Commerce

“Kashiwazaki Shoko-Kaigi-Sho”

Higashi-Honcho 1-2-16,

Kashiwazaki-City, Niigata, Japan

Tel: +81-257-22-3161, Fax: +81-257-22-3570

Workshop logistics and accommodation

Enquiries regarding logistical arrangements (hotel, accommodation, transportation, etc.) and any general information requests should be addressed to NISA (Mr Kentaro Morita, email morita-kentaro@meti.go.jp and Ms Aya Ishimi email ishimi-aya@meti.go.jp).

VISA

Participants should check whether they need a visa to enter Japan. The IAEA Scientific Secretaries will send an invitation letter if so requested for such purposes.

10. EXPENDITURES

The organizational cost of the workshop will be borne by the host organizations. The IAEA is not in a position to bear the travel and other costs of the designated participants to the workshop. However, limited funds are available to help cover the cost of participants from Member States eligible to receive technical assistance under the IAEA's technical cooperation programme. Such assistance can be offered, upon specific request through official channels, to one participant per country provided that, in the IAEA's view, this participant will make an important contribution to the workshop. The application for financial support should be made at the time of nomination of the participant.

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PARTICIPATION FORM

International Seismic Safety Centre

International Workshop on Seismic Safety of Nuclear Installations

17–19 March 2010

Kashiwazaki, Japan

***Please, complete and send before 29 January 2010 to the competent official authority
(Ministry of Foreign Affairs or National Atomic Energy Authority, Organization) for
transmission to:***

Mr Shin Morita
International Atomic Energy Agency
Vienna International Centre, PO Box 100
1400 Vienna, Austria

Tel: +43-1-2600-22614 / Fax: +43 1 26007-22614 / Email: S.Morita@iaea.org

Participants should register as soon as possible upon the receipt of this Information Sheet.

Surname:	
Given Names:	Dr/Mr/Ms
Title (position):	
Institution/Organization/Company:	
Full address:	
Tel:	Fax:
Telex:	Email:
I intend to present a paper_No ____ Yes, with the following title: And enclose a 500 word extended summary.	
Date:	Signature: