



International Conference on the Safety of Radioactive Waste Disposal

**3-7 October 2005
Tokyo, Japan**

Organized by the
International Atomic Energy Agency (IAEA)

in co-operation with the
Nuclear Energy Agency of the Organization for Economic Co-operation and Development
(OECD/NEA)

and hosted by the
Government of Japan through the
Nuclear and Industrial Safety Agency (NISA),
Ministry of Economy, Trade and Industry (METI),
in cooperation with the Japan Nuclear Energy Safety Organization (JNES)

ANNOUNCEMENT AND CALL FOR PAPERS

1. BACKGROUND

A number of international conferences of importance for radioactive waste management have taken place in recent years. The 'Cordoba' conference, March 2000, was organized with a view to identifying issues of international concern pending the coming into force of the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management (the Joint Convention). The Vienna 'Issues and Trends' conference, December 2002, addressed developments with these issues. The Joint Convention came into force in June 2001 and the first review meeting of Contracting Parties took place in Vienna in November 2003.

The articles of the Joint Convention place an obligation on Contracting Parties to assess the safety of waste management facilities prior to their construction and operation and to review the safety of existing facilities. In addition, assessment of safety is one of the fundamental principles of radioactive waste management and forms the technical basis for the regulatory approval of all waste management facilities and activities. At the first review meeting of the Joint Convention there was discussion on the development and use of effective safety assessment methods where it was

acknowledged that for some applications the safety assessment tools available were adequate but for others, there was scope for further development. There are continuing international initiatives to develop, improve and harmonize approaches to assessing and demonstrating the safety of waste disposal facilities, such as the Agency's ISAM (Improving Safety Assessment Methodology) and ASAM (Application of Safety Assessment Methodology) programmes.

There are many ongoing activities in the waste disposal arena around the world. A number of geological disposal facilities are now under development using new and innovative technologies and the regulatory process of licensing these facilities is underway, or is being planned. Programmes are also in place to engage the broad range of interested stakeholders in these projects, with a view to developing their confidence in the design of facilities and the technologies employed. Safety assessment and the structuring of *safety cases* in support of license applications are fundamental to the licensing process and are important in the communication on issues of concern to interested parties and in the development of public confidence.

Addressing waste and fuel cycle concerns, in his statement in the 48th General Conference of the IAEA in September this year the Director General once again reiterated the importance of multinational approaches. "The Agency continues to assist Member States in developing waste management and disposal strategies - and I am pleased to see the renewed interest in multinational approaches to spent fuel management and disposal. More than 50 countries now have spent nuclear fuel, including fuel from research reactors, stored in temporary sites, awaiting disposal or reprocessing". The Director General indicated that he was encouraged that the Russian Federation had expressed interest in an international approach to spent fuel storage and reprocessing, and has agreed to work with the Agency in giving consideration to its feasibility. In this regard it is intended to hold a conference in Russia in 2005 to discuss ways of moving forward with international cooperation on such an initiative. He also indicated a group of senior experts had been appointed to look into various options for multilateral control over certain fuel cycle activities and that the group "could focus initially on how to guarantee the supply of technology and fuel for nuclear generated electricity, and how to set up one or more international repositories for spent nuclear fuel".

Many countries have developed and operated near surface radioactive waste disposal facilities for low and intermediate level waste, utilizing a number of design concepts. Well structured and systematic safety assessments have been developed for many of these facilities, but for some older facilities, developed before present safety standards were in place, this has not been the case and considerable efforts have been expended in recent years to address this situation. In addition, periodic reassessment of safety is being undertaken for a number of facilities, making use of the improved and internationally harmonized approaches to safety assessment.

There have also been developments in considerations for disposal of small amounts of waste, particularly disused sealed radiation sources, where borehole disposal concepts have been adopted or are under serious consideration in a number of countries. Because of both safety and security concerns, it is recognized that the ongoing storage of disused radiation sources in surface facilities is less than desirable, and that if safe and cost effective disposal options are available, they should be exploited to the extent possible. Whilst the disposal concepts proposed employ relatively straightforward and robust technologies, the demonstration of their long-term safety remains complex. Nevertheless, the role of generic safety assessment in safety demonstration is being explored and such approaches are attracting attention.

Other disposal options, at intermediate depths, are being explored for disposal of radioactive waste that is not suitable for near surface disposal, but which does not warrant the degree of isolation and containment provided by geological disposal. The cost effective utilization of such options is attractive, but again the extent of effort necessary in demonstrating their safety remains to be agreed. Countries are also developing and operating facilities for waste containing very low activity radioactive waste.

2. CONFERENCE OBJECTIVE

The objective of the Conference is to foster information exchange on the safety of radioactive waste disposal covering; the choice of appropriate waste disposal options, safety standards, safety cases for presenting safety arguments and demonstrating compliance with standards, safety assessment methodologies and their application, dealing with uncertainty, regulatory review and decision making, the derivation of limits, controls and conditions to be applied to the development and operation of disposal facilities to ensure safety and the communication of safety issues to all interested stakeholders and confidence development. The conference will consider all possible disposal options available, drawing from experience in Member States with near surface and geological disposal facilities and those at intermediate depths and giving consideration to any multilateral approach that may be adopted.

3. AUDIENCE

The conference is directed at a broad range of persons interested in radioactive waste disposal. It will be of particular interest to experts involved in the development of national radioactive waste disposal strategies, developers and operators of disposal facilities, experts involved in safety assessment and the compilation of safety cases and regulatory authorities responsible for the licensing of such facilities. It will also be of interest to regional and local government authorities within whose jurisdiction radioactive waste disposal facilities will be sited.

4. PROGRAMME STRUCTURE

The Conference programme will be based on the following approach:

- After the opening of the Conference the first session will address the various types of radioactive waste that arise in practice and the disposal options that are deemed suitable and appropriate for their disposal. The important design characteristic providing for safety in the different disposal facility options will be addressed. The internationally accepted safety standards will be discussed together with the measures necessary to demonstrate compliance with them.
- The conference will then consider the structure and content of safety cases that need to be made to present the arguments on which the safety of waste disposal facilities are based and the supporting safety assessments. It will also deal with the evidence necessary to support the safety arguments and the research programmes aimed at providing such evidence.
- A number of sessions will then deal with the type and extent of safety assessment necessary for different waste disposal facility types and designs. It will address the assessment methodology and the information needed to undertake the assessment. It will cover operational and post closure safety, the expected normal evolution of the facility over time and disruptive events, of both natural and anthropogenic origin.
- The issue of uncertainty will be addressed and how it can be dealt with in safety assessments and options for presentation in the safety case will be discussed. Overall development of confidence in the safety arguments and supporting assessments will also be addressed.
- The regulatory review process and related decision making will be covered in a further session together with the establishment and implementation of limits, controls and conditions necessary during the development, construction, operation and closure of facilities.
- Each of the various sessions will feature a limited number of invited keynote presentations and a summary of issues will be raised in submitted papers. An expert panel will discuss the issues arising from these presentations and those identified from the floor.
- The conclusions arising from the various sessions will be summarized, presented and reviewed on the final day of the conference and a set of conclusions formulated.

5. SCOPE OF THE TOPICAL SESSIONS

- A. Waste management policies and strategies for all waste types and disposal options and multinational approaches.
- B. The global safety regime
 - the Joint Convention
 - international safety standards
 - national legal and regulatory infrastructure
- C. The structure and content of safety cases
- D. The technology and safety of disposal facilities
 - geological
 - near surface
 - borehole
 - intermediate depth for non-heat-generating long-lived waste
 - mining and minerals processing waste
 - very low activity waste
- E. Building of confidence
 - dealing with data, modelling and scenario uncertainty
 - international peer review
 - use of international safety standards
 - periodic re-assessment
 - Stakeholder involvement and public acceptance
- F. Licensing
 - regulatory review and decision making
 - establishing and applying limits, controls and conditions
- G. Existing facilities and decision making on upgrading safety

6. CONTRIBUTED PAPERS AND POSTERS

Concise papers on issues falling within the scope of the topical sessions (section 5) may be submitted as contributions to the conference. These papers will not be presented orally, but will be included in a Book of Contributed Papers to be distributed free of charge to all participants upon registration. Authors of contributed papers are expected to present the substance of their papers in the form of a poster, which will be exhibited in the Poster Area.

The contributed papers must not exceed four pages in length and must be submitted in English. Each contributed paper must be preceded by an abstract, not exceeding 300 words. Authors should indicate in the paper submission form to which topical session their contribution relates (section 5). Authors are urged to make use of the IAEA's Proceedings Paper Template in Word 2000 and the user instructions available on the conference web site (section 18). Guidelines for the preparation of a contributed paper are given in the attached IAEA Guidelines for Authors on the Preparation of Manuscripts for Proceedings.

Contributed papers should be submitted electronically to email address:

Waste-Safety2005@iaea.org or sent on diskette to the Scientific Secretariat. The electronic submission should identify the paper, the proposed session topic and the software application used (the use of Microsoft Word is encouraged). To permit selection and review, the electronic version of the contributed paper must be received by the Scientific Secretariat not later than **20 April 2005**.

In addition to the electronic submission, a hard copy of the contributed paper must also be submitted through one of the competent official authorities (section 9), together with a completed Form for Submission of a Paper (**Form B**) and the Participation Form (**Form A**), to reach the IAEA also by **20 April 2005**.

Only papers that have been received by the above deadline and through the appropriate official channels will be considered for inclusion in the Book of Contributed Papers. The Secretariat reserves the right to exclude papers that do not comply with its quality standards or do not apply to one of the topics in section 5.

Authors will be informed by **end of May 2005** whether their papers have been accepted for inclusion in the Book of Contributed Papers and for presentation as a poster.

7. EXPENDITURES/GRANTS

No registration fee is charged to participants.

As a general rule, the IAEA does not pay for participants' travel and living expenses. However, limited funds are available to help meet the cost of attendance of selected specialists, mainly from developing countries with low economic resources. Generally, not more than one travel grant may be awarded to any one country. To apply for a travel grant, please send the Grant Application **Form C** — typewritten or clearly printed — through your appropriate official authority (Section 9), together with Form A and, if relevant, Form B, and an estimate of a valid travel agent of the flight costs from/to the nearest city or capital in their country and Tokyo to reach the IAEA at the latest by **20 April 2005**. Incomplete or late applications will not be considered. The grants will be lump sums usually covering **only part of the cost** of attendance.

8. PARTICIPATION

Anyone who would like to participate in the Conference must send a completed Participation Form (**Form A**) through one of the competent official authorities (Section 9) for submission to the IAEA for it to be received by **15 June 2005**. A participant will be accepted only if the Participation Form is transmitted to the IAEA by one of the official authorities.

9. CHANNELS OF COMMUNICATION

The Participation Form (Form A) and, if applicable, the Form for Submission of a Paper (Form B) and Grant Application Form (Form C) must be sent through one of the competent official authorities (Ministry of Foreign Affairs or national atomic energy authority) for subsequent transmission to the IAEA. Communications concerning technical matters should be sent to the Scientific Secretariat, and communications on administrative/logistical matters to the Conference Coordinator (section 17).

10. SCIENTIFIC VISIT

A half day tour to Tokai-mura is planned for Friday, 7 October 2005, and a full day tour to Rokkasho-mura is also planned for Saturday, 8 October 2005. Interested participants are requested to complete the attached Scientific Visit Registration Form and send it to the Japan Organizing Committee on Tokyo Conference (JOC) (see section 17) not later than **15 June 2005**.

11. EXHIBITION

A limited amount of space will be available for displays/exhibits during the Conference. Interested parties are requested to complete the attached Exhibition Enquiry Form and send it to the Japan Organizing Committee on Tokyo Conference (JOC) (Section 17) not later than **20 April 2005**.

12. DISTRIBUTION OF DOCUMENTS AND PROCEEDINGS

A preliminary programme together with details on the logistics of the Conference will be sent to all officially designated participants by the **end of June 2005**. This information will also be available on the conference web site (section 18).

The final programme and a book of contributed papers, containing all papers accepted by the programme committee, will be available free of charge upon registration at the conference.

The proceedings of the conference will contain the opening addresses, the keynote presentations, the other invited speakers' papers, the chairpersons' summaries, and the conference conclusions presented by the President of the conference on the last day of the conference. The proceedings of the conference will be published by the IAEA as soon as possible after the meeting.

13. WORKING LANGUAGE

The working language of the conference will be English. All communications must be sent to the IAEA in English.

14. ACCOMMODATION

Detailed information on accommodations and a hotel reservation form will be sent electronically to participants and will also be available on the conference website **by the end of June 2005**. Hotel room rates will range from US \$100 to 300 per night.

15. VISA

Designated participants who require a visa to enter Japan should submit the necessary application to the nearest diplomatic or consular representative of Japan as soon as possible.

16. KEY DATES/DEADLINES

Receipt by IAEA of electronic version of contributed papers	20 April 2005
Receipt by IAEA of Form for Submission of a Paper (Form B) and together with Form A and copy of contributed paper through official channels	20 April 2005
Receipt by IAEA of Grant Application Form (Form C) (if applicable) together with Form A through official channels	20 April 2005
Exhibitions Enquiry Form to JOC	20 April 2005
Receipt by IAEA of Participation Form (Form A) through official channels	15 June 2005
Scientific Visit Registration Form to JOC together with copy of Form A	15 June 2005
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IAEA Paper Acceptance Information to Authors	End of May 2005
IAEA Grant Acceptance/Rejection to Applicants	End of May 2005
IAEA Participation Acknowledgement together with Information on Hotels and Logistics	End of June 2005
Detailed Information on Scientific Visits and Exhibitions	End of June 2005

17. CONTACT INFORMATION

The following persons may be contacted for further information or assistance:

(a) Scientific issues — Scientific Secretariat (IAEA)

Mr. P. Metcalf

Waste Safety Section, NSRW
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International Atomic Energy Agency
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Telephone No.: (+43) 1-2600-22662.
Telefax No.: (+43) 1-26007
E-mail: J.M.Potier@iaea.org

(b) Administrative issues — Conference Coordinator (IAEA)

Ms. H. Schmid

Conference Services Section, MTCDD
International Atomic Energy Agency
IAEA-CN-135
P.O. Box 100
A-1400 Vienna, Austria
Telephone No.: (+43) 1-2600-21316 (or -21311)
Telefax No.: (+43) 1-26007
E-mail: H.Schmid@iaea.org
General mail for IAEA: official.mail@iaea.org

c) Scientific Visits and Exhibits, JNES

Japan Organizing Committee for the Tokyo Conference

c/o Mr. Hiroto Kawakami
Safety Standard Division
Incorporated Administrative Agency
Japan Nuclear Energy Safety Organization (JNES),
Fujita Kanko Toranomon Bldg, 3-17-1, Toranomon, Minato-ku, Tokyo, 105-0001, Japan
Telephone No.: +81-3-4511-1800
Telefax No.: +81-3-4511-1898
E-mail: kawakami-hiroto@jnes.go.jp

18. CONFERENCE WEB SITE

Please visit the IAEA conference web site regularly for any new and/or updated information regarding this conference under:

<http://www-pub.iaea.org/MTCDD/Meetings/Meetings2005.asp>

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REGISTRATION FORM FOR SCIENTIFIC VISITS

Deadline for receipt by JNES : 15 June 2005

Interested persons must send this form (preferably electronically) to the address given below. Please note that; i) only officially designated participants in the Conference will be admitted to take part in the scientific visits, and ii) visitors will be subject to positive security clearance. Also please note that the actual facilities to be visited at the two sites may be subject to unavoidable change. More detail information will be obtained on the website <http://www.jnes.go.jp/english/index.html>. Participants accepted on the visits will receive further information electronically on the arrangements for the visit by the **end of June 2005**

Japan Organizing Committee on Tokyo Conference,
c/o Scientific Visits Secretariat, Safety Standard Division,
Incorporated Administrative Agency
Japan Nuclear Energy Safety Organization (JNES),
Fujita Kanko Toranomon Bldg, 3-17-1, Toranomon,
Minato-ku, Tokyo, Japan, 105-0001,
[Telefax no. +81-3-4511-1898]
E-mail: kawakami-hiroto@jnes.go.jp

I would like to register for the following Scientific Visit:

a) Tokai-Mura (max. capacity 80 persons)
Half day bus trip on Friday afternoon, 7 October, back in the evening at hotels.
(cost-free)

- Decommissioning site of Tokai-1 GCR
 - Decommissioning activities of fuel changing machine
 - Interim storage of radioactive waste due to decommissioning activities
- Facility for LLW treatment in Tokai 2 BWR

b) Rokkasho-mura (max. capacity 80 persons)
A day trip by rail (bullet train) and bus, leaving Saturday morning, 8 October and back in the evening at hotels. (cost per person about 29,000 yen (about US \$260)).

- JNFL (Japan Nuclear Fuel)
 - Rokkasho PR center
 - Near surface disposal facility for LLW
 - Research shaft on intermediate depth (-100m) disposal
 - Storage of HLW

Name	
Institution	
Full Mailing Address	
Telephone Number	
Fax Number	
E-mail Address	
Nationality	
Date of Birth and Place	
Passport Number*	

* : Please inform the Passport Number as soon as possible, if you have not got it when you register.

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ENQUIRY FORM FOR EXHIBITIONS

Deadline for receipt by JNES : **20 April 2005**

This form is intended for companies interested in showing a video or exhibiting material relevant to the above conference. Interested parties must register by sending this form to below address:

Japan Organizing Committee on Tokyo Conference,
c/o Exhibition Secretariat, Safety Standard Division,
Incorporated Administrative Agency
Japan Nuclear Energy Safety Organization (JNES),
Fujita Kanko Toranomon Bldg, 3-17-1,
Toranomon, Minato-ku, Tokyo, 105-0001, Japan
[Telefax no. +81-3-4511-1898]

We would like to register to show a Video Exhibition (max. 14 booths for exhibition)

COMPANY NAME:	
CONTACT PERSON:	MR./MS.
FULL ADDRESS:	
TELEPHONE NO.:	TELEFAX NO.:
E-MAIL:	
CONTENTS OF VIDEO OR EXHIBITION: (DISPLAY TIME OF VIDEO : MINUTES)	

Specifications are as follows.

- Video** Display is cost-free.
 Display screen: 300 inches (6120 x 4572)
 Videotape type must be VHS, DVD, β -CAM, PC-data. Display time will be preferably within 10 minutes.
- Exhibition:** Exhibition fee is 120,000 yen (about \$1,100)
 Exhibition Space: 3000wx2000d (6m²) including side walls, electric outlet(100V, 50Hz),
 Installation and setting of exhibition must be carried out by exhibitors. (Two days available 10:00-17:00, 1&2 Oct. 2005)
 Removal of exhibition must be also carried out by exhibitors. (Half day available 13:00-17:00, 7 Oct. 2005)

Acceptance of a video and/or an exhibit will be sent electronically by the end of June 2005. More detail information will be obtained on the website <http://www.jnes.go.jp/english/index.html>